外部委託業者の募集

References: IO/25/OT/70001336/AJI

"Framework Contract for Manufacturing Shielding Trays Frames for IO Ports"

（IO ポート用シールディングトレイフレーム関する枠組み契約）

IO 締め切り 2025 年 8 月 8(金)

〇はじめに

本事前情報通知（PIN）は、作業契約の入札授与および実行につながる公開入札調達プロセスの最初のステップです。

本文書の目的は作業範囲と入札プロセスに関する技術的な内容の基本的な要約を提供することです。

〇背景

ITER は平和利用の核融合発電の科学的および技術的な実現可能性の実証を目的とした、国際共同研究開発プロジェクトです。ITER 機構の 7 つのメンバーは、;欧州連合（EURATOM が代表）、日本、中華人民共和国、インド、大韓民国、ロシア連邦、および米国です。

ITER の敷地はフランス南東部のブーシュデュローヌ地区にあり、ITER 本社（HQ）もあるフランス CEA サン・ポール・レ・デュランス に近いところに位置しています。詳細については、ITER のウェブサイト http://www.iter.org を参照して下さい。

〇作業範囲

現在の入札プロセスは、IOポート（入出力ポート）用のシールドトレイフレーム製造にかかるフレームワーク契約を締結することを目的としています。ITER機構内では、計測プログラムが本契約の実施を担当します。

本契約に選定される契約者は、以下のためのオーステナイト系ステンレス鋼製フレームの原材料調達、製造、および供給を行うものとします。

水平ポートプラグ（EPP） #2、#8、#17 のシールドトレイ

上部ポートプラグ（UPP） #4、#5、#6 のシールドトレイ

〇調達プロセスと目的

目的は、競争入札プロセスを通じて供給契約を落札することです。

この入札のために選択された調達手続きは公開入札手続きと呼ばれます。

オープン入札手順は、次の 4 つの主要なステップで構成されています。

- ステップ 1-事前情報通知（PIN）

  事前通知（Prior Indicative Notice）は、公開入札プロセスの最初の段階です。IO は、国内機関に対して、今後の入札に関する情報を公開するよう正式に招待し、企業、機関、または

その他の団体に入札の機会を事前に知らせます。入札に興味のある企業は、下記の調達スケジュールに示された期限までに、表明書（付属書Ⅱ）を E メールでご提出くださいますようお願いいたします。

- ステップ 2-入札への招待（IIT）
  PIN の発行から 14 作業日以内に、関心を示した入札者に対して入札への招待（IIT）が送付されます。この段階では、PIN を確認した関心のある入札者が入札書類を入手し、入札指示に従って提案書を準備・提出することができます。

- ステップ 3-入札評価プロセス
  入札者の提案は、ITER 機構の公正で専門的な技術評価委員会によって評価されます。入札者は、技術範囲に従い、入札への招待（IIT）に記載された特定の評価基準に基づいて作業を実施できることを示す技術的な適合性の詳細を提供する必要があります。

- ステップ 4-落札
  認定は、入札への招待（IIT）に記載されている、コストに見合った最適な価格または技術的に準拠した最低価格に基づいて行われます。

〇概略日程

概略日程は以下の通りです：

マイルストーン	暫定日程
事前指示書（PIN）の発行	2025 年 7 月 28 日
関心表明フォームの提出	2025 年 8 月 8 日
iProc での提案依頼書 (RFP)と入札への招待（ITT）の発行	2025 年 8 月 11 日の週
明確化のための質問（もしあれば）	2025 年 8 月 26 日
明確化のための質問への回答	2025 年 8 月 29 日
iPROC での入札提出	2025 年 9 月 1 日
入札評価と契約授与	2025 年 9 月
枠組み契約調印	2025 年 9 月

〇契約期間と実行

予想される契約期間は48か月です。契約の最終調印日前の作業はありません。

〇経験

契約者に求められる要件は以下の通りです：

- 厳格な組成制限と仕様が求められるステンレス鋼部品の原材料調達における実証された能力と経験

- 中小サイズ（最大 200kg）のステンレス鋼部品の機械加工における実証された能力と経験
- 寸法精度を伴う機械加工における実証された能力
- （必須ではないが、RCC-MR などの）規格や基準に則った製造における実証された能力

〇候補

参加は、個人またはグループ/コンソーシアムに参加するすべての法人に開放されます。法人とは、法的権利及び義務を有し、ITER 加盟国内に設立された個人、企業又は機構をいいます。ITER 加盟国は欧州連合(EURATOM メンバー)、日本、中華人民共和国、インド共和国、大韓民国、ロシア連邦、アメリカ合衆国です。

法人は、単独で、またはコンソーシアムパートナーとして、同じ契約の複数の申請または入札に参加することはできません。共同事業体は、恒久的な、法的に確立されたグループ又は特定の入札手続のために非公式に構成されたグループとすることができます。

コンソーシアムのすべての構成員(すなわち、リーダーと他のすべてのメンバー)は、ITER 機構に対して連帯して責任を負います。

コンソーシアムとして許可されるために、その点で含まれる法人はコンソーシアムの各メンバーをまとめる権限をもつリーダーをもたなければなりません。このリーダーはコンソーシアムの各目メンバーのために責任を負わなければなりません。

指名されたコンソーシアムのリーダーは、入札段階で、コンソーシアムのメンバーの構成を説明する予定です。その後、候補者の構成は、いかなる変更も ITER 機構に通知することなく変更してはなりません。かかる認可の証拠は、すべてのコンソーシアムメンバーの法的に授権された署名者が署名した委任状の形式で、しかるべき時期に IO に提出しなければなりません。

どのコンソーシアムメンバーも IPROC に登録する必要があります。

【※　詳しくは添付の英語版技術仕様書「Framework Contract for Manufacturing of Shielding Trays Frames for IO Ports」をご参照ください。】

ITER 公式ウェブ　http://www.iter.org/org/team/adm/proc/overview からもアクセスが可能です。

「核融合エネルギー研究開発部門」の HP：　http://www.fusion.qst.go.jp/ITER/index.html では ITER 機構からの各募集（IO 職員募集、IO 外部委託、IO エキスパート募集）を逐次更新しています。ぜひご確認ください。

イーター国際核融合エネルギー機構からの外部委託
に関心ある企業及び研究機関の募集について

＜ITER 機構から参加極へのレター＞

以下に、外部委託の概要と要求事項が示されています。参加極には、提案された業務に要求される能力を有し、入札すべきと考える企業及び研究機関の連絡先の情報を ITER 機構へ伝えることが求められています。このため、本研究・業務に関心を持たれる企業及び研究機関におかれましては、応募書類の提出要領にしたがって連絡先情報をご提出下さい。

china eu india japan korea russia usa
Route de Vinon-sur-Verdon - CS 90 046 - 13067 St Paul Lez Durance Cedex - France

PRIOR INDICATIVE NOTICE (PIN)

OPEN TENDER SUMMARY

IO/25/OT/70001336/AJI

for

Framework Contract for Manufacturing of Shielding Trays Frames for IO Ports

Abstract

The purpose of this summary is to provide prior notification of the IO intention to launch a competitive Open Tender process in the coming weeks. This summary provides some basic information about the ITER Organisation, the technical scope for this tender, and details of the tender process for the award of a Framework Contract for Manufacturing of Shielding Trays Frames for IO Ports.

1 Introduction

This Prior Indicative Notice (PIN) is the first step of an Open Tender Procurement Process leading to the award and execution of a Service Contract.
The purpose of this document is to provide a basic summary of the technical content in terms of the scope of work, and the tendering process.
The Domestic Agencies are invited to publish this information in advance of the forth-coming tender giving companies, institutions or other entities that are capable of providing these supplies prior notice of the tender details.

2 Background

The ITER project is an international research and development project jointly funded by its seven Members being, the European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER is being constructed in Europe at St. Paul–Lez-Durance in southern France, which is also the location of the headquarters (HQ) of the ITER Organization (IO).

For a complete description of the ITER Project, covering both organizational and technical aspects of the Project, visit www.iter.org.

3 Scope of Work

The present tender process aims to set up a Framework Contract for Manufacturing of Shielding Trays Frames for IO Ports. Within the ITER Organization, the Diagnostic program will be in charge of implementing this Contract.
The Contractor, who will be selected for this Contract shall procurement of raw materials, manufacture and supply of Austenitic Stainless-Steel frames for shielding trays of Equatorial Port Plugs EPP#2, 8 & 17 and Upper Port Plugs UPP#4, 5 & 6.

4 Procurement Process & Objective

The objective is to award a Supply Contract through a competitive bidding process.

The Procurement Procedure selected for this tender is called the Open Tender procedure.

The Open Tender procedure is comprised of the following four main steps:

- Step 1- Prior Indicative Notice (PIN) :
  The Prior Indicative Notice is the first stage of the Open Tender process. The IO formally invites the Domestic Agencies to publish information about the forth-coming tender in order to alert companies, institutions or other entities about the tender opportunity in advance. **Interested tenderers are kindly requested to return the expression of interest form (Annex I) by e-mail by the date indicated in the procurement timetable below.**

- Step 2 - Invitation to Tender (ITT) :
  Within 14 days of publishing the Prior Indicative Notice (PIN), the Invitation to Tender (ITT) will be advertised. This stage allows interested bidders who have seen the PIN to obtain the tender documents and prepare and submit their proposals per the tender instructions.

- Step 3 – Tender Evaluation Process :

Tenderers' proposals will be evaluated by an impartial, professionally competent technical evaluation committee of the ITER Organization. Tenderers must provide details demonstrating their technical compliance to perform the work in line with the technical scope and per the criteria listed in the invitation to tender (ITT).

- Step 4 – Contract award :
  A Supply contract will be awarded based on best value for money according to the evaluation criteria and methodology described in the Invitation to tender (ITT).

5 Procurement Timetable

The tentative timetable is as follows:

Milestone	Date
Publication of the Prior Indicative Notice (PIN)	28 July 2025
Deadline for Submission of Expression of interest form	08 August 2025
Request for Proposals (RFP)- Invitation to Tender (ITT) advertisement	11 August 2025
Clarification Questions (if any) and Answers deadline	26 August 2025
Answers to Clarifications	29 August 2025
Tender Submission in IPROC	01 September 2025
Tender Evaluation & Contract Award	September 2025
Contract Signature	September 2025

6 Quality Assurance Requirements

Prior to the commencement of any work under this Contract, the selected Contractor shall produce a "Quality Plan" and submit it to the IO for approval, describing how they will implement the ITER Procurement Quality Requirements.

7 Contract Duration and Execution

The duration shall be for 48 months. No work shall commence before the date of final signature of the Contract.

8 Experience/Expertise/Knowledge

Preferably, the Contractor is expected to own the following experience/expertise/knowledge:

- Demonstrated Capability and Experience of Procuring Raw Materials for Stainless Steel Components Subject to Tight Compositional Limits and Specifications;
- Demonstrated Capability and Experience of Machining of Small – Medium Size (Up to 200kg) Stainless Steel Components;
- Demonstrated Capability of Machining with Dimensional Accuracy;
- Demonstrated Capability of manufacturing under codes and standards (preferably RCC-MR but not mandatory).

9 Candidature

Participation is open to all legal entities participating either individually or in a grouping/consortium. A legal entity is an individual, company, or organization with legal rights and obligations established within an ITER Member State.

Legal entities cannot participate individually or as a consortium partner in more than one application or tender of the same contract. A consortium may be a permanent, legally-established grouping, or a grouping constituted informally for a specific tender procedure. All consortium members (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization.

In order for a consortium to be acceptable, the individual legal entities included therein shall have nominated a leader with authority to bind each member of the consortium, and this leader shall be authorised to incur liabilities and receive instructions for and on behalf of each member of the consortium.

It is expected that the designated consortium lead will explain the composition of the consortium members in a covering letter at the tendering stage. Following this, the Candidate's composition must not be modified without notifying the ITER Organization of any changes. Evidence of any such authorisation shall be submitted to the IO in due course in the form of a power of attorney signed by legally authorised signatories of all the consortium members.

10 Sub-contracting Rules

All sub-contractors who will be taken on by the Contractor shall be declared with the tender submission in IPROC. Each sub-contractor will be required to complete and sign forms including technical and administrative information, which shall be submitted to the IO by the tenderer as part of its tender.
The IO reserves the right to approve (or disapprove) any sub-contractor which was not notified in the tender and request a copy of the sub-contracting agreement between the tenderer and its subcontractor(s). Rules on sub-contracting are indicated in the RFP itself.

ANNEX I

EXPRESSION OF INTEREST & PIN ACKNOWLEDGEMENT

To be returned by e-mail to: amankumar.joshi@iter.org copy Chloe.Perret@iter.org

TENDER No.	**IO/25/OT/70001336/AJI**
DESIGNATION of SERVICES:	**Framework Contract for Manufacturing of Shielding Trays Frames for IO Ports**
OFFICER IN CHARGE:	**Aman Kumar Joshi – Procurement Division ITER Organization**

☐ WE ACKNOWLEDGE HAVING READ THE PIN NOTICE FOR THE ABOVE-MENTIONED TENDER

☐ WE INTEND TO SUBMIT A TENDERs

☐ WE WILL NOT TENDER FOR THE FOLLOWING REASONS:

……

Company name:.....

COMPANY STAMP

Signature:

Name: .....

Position: .....

Tel: .....

E-mail.....

Date: .....

IDM UID
ECJ7FC

VERSION CREATED ON / VERSION / STATUS
21 Jul 2025 / 1.1 / Approved

EXTERNAL REFERENCE / VERSION

Technical Specifications (In-Cash Procurement)

Technical Specifications - Manufacturing of Shielding Trays Frames for IO Ports

Technical Specifications - Manufacturing of Shielding Trays Frames for IO Ports
Main document

Table of Contents

1 Preamble

This Technical Specification is to be read along with the General Management Specification for Service and Supply (GM3S) [1] that constitutes a full part of the technical requirements. In case of conflict, the content of the Technical Specification supersedes the contents of [1].

This technical specification is prepared to give the general top level supply requirements of the Shielding Tray Frames of the integrated Equatorial Port Plugs EPP#2, 8 & 17 and Upper Port Plugs UPP#4, 5 & 6. Detailed scope of each of these deliverables is given Annexures to this Technical Specification.

2 Purpose

The purpose of this Contract is for the procurement of raw materials, manufacture and supply of Austenitic Stainless-Steel frames for shielding trays of Equatorial Port Plugs EPP#2, 8 & 17 and Upper Port Plugs UPP#4, 5 & 6.

Detailed scope of work is given in Article 6 below. This contract is to be executed under a Framework Contract, with task orders identified for deliverables per Port Plug as well as the scope of work and place of execution.

3 Acronyms & Definitions

3.1 Acronyms

The following acronyms are the main ones relevant to this document*

Abbreviation	Description
A&M	Alignment & Metrology
ADP	Acceptance Data Package
ALARA	As Low As Reasonably Achievable
ASL	Approved Supplier's List
B4C	Boron Carbide
BTP	Built-To-Print
C&S	Codes and Standards
CAD	Computer Assisted Design
CFSI	Counterfeit Fraudulent Suspect Item
CMM	Coordinates Measurement Machine
CMP	Contract Management Plan
CRN	Contractor's Release Note
CRO	(IO) Contract Responsible Officer
CuCrZr	Alloy Copper-Chromium-Zirconium
DA	Domestic Agency
DAP	Delivered At Place (Incoterm Category)
DR	Deviation Request or Defined Requirement, as the case may be
DRR	Delivery Readiness Review
DSM	Diagnostic Shielding Module
DT	Destructive Testing
DWS	Detailed Work Schedule

Abbreviation	Description
EOM	End-Of-Manufacturing
EPP	Equatorial Port Plug
FAT	Factory Acceptance Tests
FWC	Framework Contract
HEL	Highly Exceptional Loads
HP	Hold Point
IDM	ITER Document Management
IO	ITER Organization
IP	Intellectual Property
IPR	Intellectual Property Rights
ISS	Interspace Support Structure
ITP	Inspection & Test Plan
IVH	ITER Vacuum Handbook
KOM	Kick-Off Meeting
LDP	Liquid Dye Penetrant
MDB	Manufacturing Database
MIP	Manufacturing and Inspection Plan
MoM	Minutes of Meeting
MRR	manufacturing Readiness Review
MS	Management Specification
NC	Non-Conformance / non-conformity
NC DB	Non-Conformity Date Base
NCR	Non-Conformity Report
NDE	Non-Destructive Examination
NDT	Non-Destructive Testing
NP	Notification Point
NSC	Not Safety Classified
PCSS	Port Cell Support Structure
PIC	Protection Important Component
PIF	Port Integration Facility
PNI	Part Number of ITER
PP	Port Plugs
PPS	Product Procurement Specifications / Port Plug Structure
QA	Quality Assurance
QARO	Quality Assurance Responsible Officer
QC	Quality Class
QP	Quality Plan
RH	Remote Handling
ST	Shielding Tray
SAT	Site Acceptance Test
SIC	Safety Important Component
SLP	Service Logistic Provider
SMDD	System for the Management of Diagrams and Drawings

Abbreviation	Description
SQEP	Suitably Qualified and Experienced Personnel
SRO	Safety Responsible Officer / Start of Research Operation
SS	Sub-Contractor Schedule
SWA	Stop Work Authority
TO	Task order
TRO	Technical Responsible Officer
TRP	Technical Responsible Person
TS	Technical Specification
UDSM	Upper Port Plug Diagnostic Shielding Module
UHV	Ultra High Vacuum
UPP	Upper Port Plug
VQC	Vacuum Class
WBS	Work Breakdown Structure
WP	Work Package

**For a complete list of ITER abbreviations see: ITER Abbreviations (ITER_D_2MU6W5).*

Table 1: List of acronyms used in this Technical Specification.

3.2 Definitions

Client: ITER Organization, referred to as IO in the rest of this document.

Contractor: shall mean an economic operator who have signed the Contract in which this document is referenced. In this document as well as in the mandatory Appendixes and Annexures referred here, the names Contractor and Supplier are used interchangeably.

In-Vessel Components: This term is used in this specification for indicating all the components, sub-assemblies and provision for services (electrical, gas and cooling water) that constitute the Integrated Diagnostic Port Plug Assembly, other than Interspace and Port Cell Support structures and their associated components *(that are called as Ex-vessel components)*

Integrated Diagnostic Port Plug Assembly: This assembly mainly consists of Diagnostic Shield Modules (DSM) with provision for shielding (Shielding blocks, Shielding Trays and Stainless-Steel backfilling and associated attachments) housing associated diagnostic tenant systems and Service Systems (electrical, cooling water and gas) connections with provisions for required layouts. This DSM is contained in the Customised Port Plug Structure and attached to the Diagnostic First Walls.

Diagnostic Tenant Assembly: These are the diagnostic systems or other ancillary system to be integrated within the Integrated Diagnostic Port Plug Assemblies or within ISS / PCSS of the subject Equatorial Port Plugs.

Ex-Vessel Components: This term is used in this specification for indicating all the components, sub-assemblies and provision for services (electrical, gas and cooling water) that constitute Interspace Support Structures and Port Cell Support Structure Assemblies and their associated components (e.g., Common Shielding, Bio-shield Structure Concrete, Cooling Services, Supports for Cooling Services etc.), other than the In-vessel Components.

Machine: The term "Machine" is used to describe the ITER Tokamak Machine where the final installation of these deliverables will be done.

On site Assembly: The term "On site assembly" is used to describe the integration activities planned at IO's Port Integration Facility, taking into account the availability, feasibility and convenience of assembling the components. These activities are out of the scope of this contract.

Assembly: The term "Assembly" is used to describe the assembly activities of the components (mainly mechanical) of the deliverables planned by the Contractor. These activities are not in the scope of this contract.

Integration: The term "Integration" is used to describe the integration activities of diagnostic tenant systems with the ex-vessel components (mainly ISS / PCSS) assemblies (only in case of Equatorial Port Plugs 2, 8 & 17) which shall also include performance testing. These activities are out of the scope of this contract.

Installation: The term "Installation" is used to describe the installation activities of in-vessel components in the Machine. These activities are out of the scope of this contract.

Free issue items: These are the items that are supplied by IO as Free Issue and procurement is not in the scope of the present contract. In such a case, only manufacturing activity will be in the scope of the present contract.

IDM ID: This is the IDM document number referred.

4 Applicable Documents & Codes and standards

4.1 Applicable Documents

The following documents constitute the applicable documents under the scope of this Technical Specification which provide additional details for better understanding of the technical requirements defined. These documents shall be provided at the tendering stage.

It is the responsibility of the Contractor to identify and request for any documents that would not have been transmitted by IO, including the list of following reference documents.

This Technical Specification takes precedence over the referenced documents. In case of conflicting information, this is the responsibility of the Contractor to seek clarification from IO.

Upon notification of any revision of the applicable document transmitted officially to the Contractor, the Contractor shall advise within 4 weeks of any impact on the execution of the contract. Without any response after this period, no impact will be considered.

Ref	Title	IDM Doc ID	Version
1	General Management Specification for Service and Supply (GM3S)	82MXQK	1.4
2	Order related 7 February 2012 relating to the general technical regulations applicable to INB-EN,	7M2YKF	1.7
3	Codes and Standards for ITER Mechanical Components	25EW4K	4.0
4	ITER Vacuum Handbook	2EZ9UM	2.5
5	ITER Dimensional Metrology Handbook	46FN9B	2.1
6	ITER Requirements Regarding Contractors Release Note	22F52F	5.0
7	Procedure for the Usage of the ITER CAD Manual	2F6FTX	1.1
8	Procedure for the CAD Management plan	2DWU2M	2.2

Ref	Title	IDM Doc ID	Version
9	ITER Numbering System for Components and Parts	28QDBS	5.0
10	Internal Regulations	27WDZW	3.1
11	ITER Planning & Scheduling Procedure	2DWMCW	4.3
12	Required Scheduling Standards	7A4588	3.2
13	ITER Procurement Quality Requirements	22MFG4	5.1
14	IO QA Deviation Request Template, .	2LRNQP	4.0
15	Suppliers Deviation Request Template	2LRNQP	4.0
16	Procurement Requirements for Producing a Quality Plan,	22MFMW	4.0
17	ITER Configuration Management Plan	27LHHE	3.3
18	Procedure for implementation of a Manufacturing and Inspection Plan	22MDZD	3.7
19	Manufacturing Inspection Plan Template for Manufacturing Database (MDB)	VGDUSJ	2.3
20	General Management Specification for Executing Entities at the ITER Site	YX55YY	2.3
21	Contractor Safety Management Procedure	Q2GBJF	1.4
22	Working Instruction for the Delivery Readiness Review (DRR)	X3NEGB	2.0
23	ITER Quality Assurance Program,	22K4QX	8.5
24	IO/DA Documentation Exchange and Storage	35BVQR	5.0
25	Procedure for management of Deviation Request,	2LZJHB.	8.1
26	ITER Policy on Safety, Security and Environment Protection Management	43UJN7	3.1
27	Procedure for management of Nonconformities,	22F53X	9.1
28	Guideline for Identification of the Protection Important Activities,	SBYJXD	1.4
29	Guideline for identification (Symptoms) of Counterfeit, Fraudulent and Suspect Items (CFSI)	XKUKAX	1.3
30	Quality Classification Determination	24VQES	6.0
31	NCR Database - Introduction & How to for Suppliers and Contractors	SM2JWP	3.7
32	ITER_D_2X4E9A - Root Cause Analysis Leaflet	2X4E9A	1.1
33	ITER_D_338G4B - Protection Important Activities and Defined Requirements for All ITER Mechanical PIC Equipment	338G4B	5.0
34	Chemical composition and impurity requirements for materials	REYV5V	2.3
35	Agreement on the Establishment of the ITER Organization	2W46RD	1.1
36	Code de Environment Art L593-1		
37	Provisions for Implementation of the Generic Safety Requirements by the External Actors/Interveners	*SBSTBM*	2.2
38	Defined requirements for PBS 55 - Diagnostics	NPEVB6	2.0
39	SRD-55 (Diagnostics) from DOORS	28B39L	5.5

Table 2: List of Applicable Documents.

4.2 Reference Documents

The following documents in Table-3 constitute reference documents under the scope of this Technical Specification to provide a better understanding of the technical requirements defined. They do not constitute specification requirements. These documents shall not be provided at the tender stage.

Ref	Title	IDM Doc ID	Version
[R1]	55.Q8 - Load Spec(s) (SLS) for in-port components	WQFJA6	1.7
[R2]	Safety Important Functions and Components Classification Criteria and Methodology	347SF3	1.8
[R3]	Quality Classification Determination	24VQES	6.0

Table 3: List of Reference Documents.

4.3 Codes and Standards

The following in Table-4 are the applicable codes and standards that shall be followed for supply of the subject components and assemblies. Applicable general requirements are specified in Article 7.1 below.

Ref	Title	IDM Doc ID	Edition
[CS1]	RCC-MR	-	2007
[CS2]	EN, ISO and ASTM Standards*	-	
*) All the relevant standards applicable as per [CS1]			

Table 4: List of Codes and Standards.

4.4 List of mandatory appendixes

The following list in Table-5 includes all mandatory appendixes that define the technical requirements applicable during the different stages of the manufacturing of the Shielding Tray Frame Port Plug components.

Appendix	Title	IDM ID
B1_01	CAD and design activities management	ECJZM3
B1_02	Material procurement and traceability	ECK626
B1_03	Cutting, machining and welding requirements	EEFWBR
B1_04	Cleanliness, surface finish and vacuum requirements	EEFXW7
B1_05	Dimensional inspection activities	ELJQAZ
B1_06	Examination Requirements	ELJXXZ
B1_07	Final acceptance tests at manufacturer’s facility	ELRSFE
B1_08	Preservation of cleanliness, storing, packing, handling and shipping requirements	ELKBA8

Table 5: List of Appendixes of this Technical Specification.

5 Overview of the Technical Specification

5.1 General Description

A key aspect of the research program of ITER is the diagnosis of the plasma and the first-wall, e.g. the plasma temperature, density, radiative properties, first-wall resilience, etc. For this purpose, a large number of different types of diagnostic equipment peer into the ITER vacuum vessel from many different vantage points.

In ITER required diagnostics are inserted through Port Plugs (Figure 1) at three levels namely upper, equatorial and lower. The diagnostic instruments and components are sensitive for high heat load, neutron damage, transient electromagnetic field, coating by dust and metallic vapour deposition, etc. For this purpose, on each port plug a DSM is installed for protecting diagnostic instruments and components from heat load, high plasma disruption loads, neutrons and deposits.

The design of DSMs is driven, among many others, by several key requirements. First of all, the total PP weight must not exceed the allowable as the limit imposed by other interfacing components and structures involved in the PPs assembly and maintenance. On the other hand, the shielding capability of DSMs must effectively limit the activation in the Port Cells Interspaces (man access corridors) following the ALARA (As Low As Reasonably Achievable) principle, in order to minimize radiation exposure to the workers and to allow maintenance and inspection hands-on operations (yellow zone).

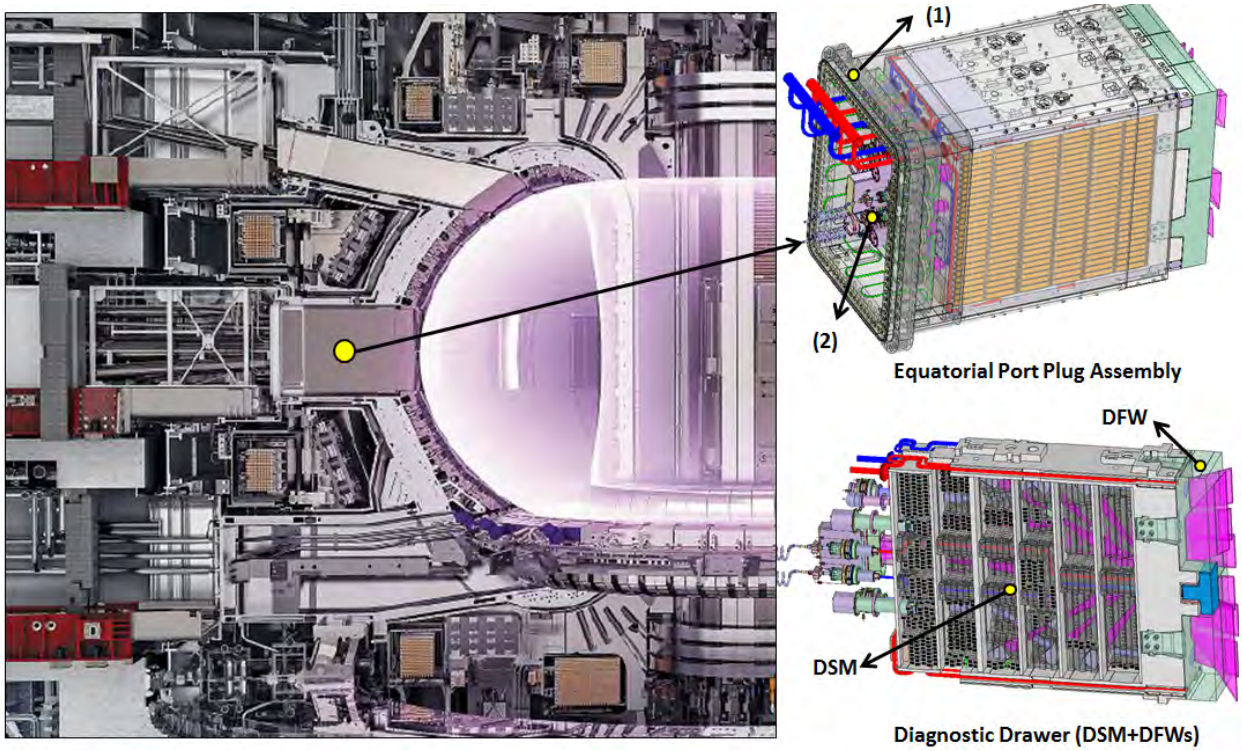

Figure 1: Location of Diagnostic Port Plug in the ITER Tokamak Machine.

Filling all spaces on DSMs not occupied by diagnostics, sight lines, services, etc… with B4C as shielding material poses additional technical difficulties. The mechanical attachment solution of B4C elements to the DSM structure is neatly isolated to ensure the integrity of the fragile shielding ceramic elements during the different events affecting the EPP in normal and off-normal conditions. B4C costs related to shielding customization should be limited as well by using standard pieces that permits savings related to the volume ordered. Other technical

concerns are the eventual need of cooling of relatively big B4C pieces in which the use of gun-drills is not feasible, the RH compatible assembly and disassembly of B4C pieces, the shielding arrangement with independent or compatible access for assembly and deployment of other diagnostic components and its compatibility with the implementation of common permanent services (electrical, cooling…).

The Shielding Tray (ST) is the basic unit used as shielding element which is assembled on DSM the frame (see Figure 2). STs are formed by an Austenitic Stainless-Steel frame and B4C blocks which are attached to the frame using secured clamps and pre-stressed push-on fasteners. STs easily allow the creation of internal spaces for sight lines implementation and diagnostics integration. Typical weight of a ST is in the order of 10 kg, fully compatible with the RH standard means. Internal voids are also complemented with independent SS backfilling elements, aimed to reduce the internal streaming within the DSM (see Figure 3). B4C blocks are standard shaped and may be serially manufactured using hot pressing and sintering techniques with no need of specific machining. STs are fixed to the DSM frame with captive bolts leading to an enhanced heat evacuation in the connection between ST and DSM.

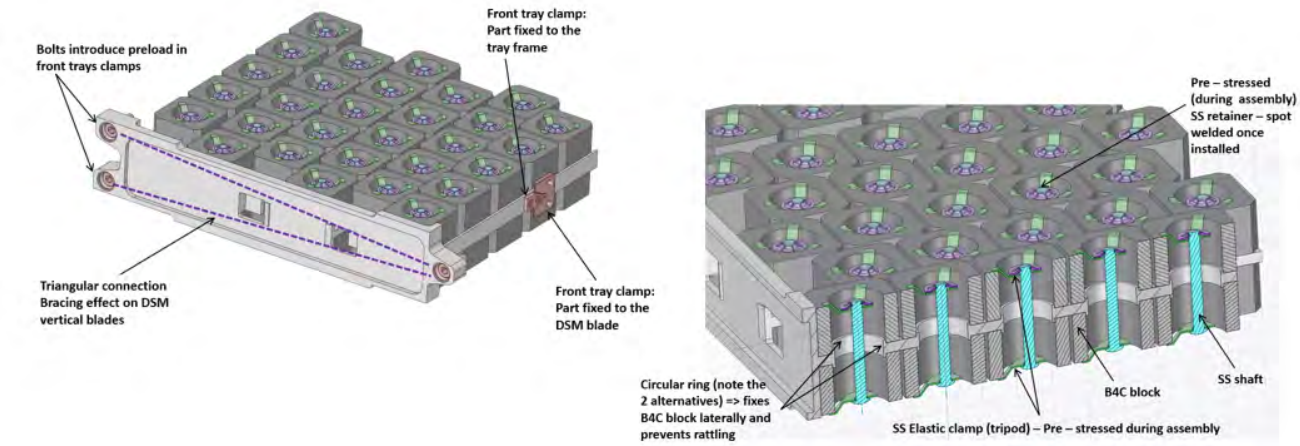

Figure 2: Schematic representation of a typical shielding tray assembly.

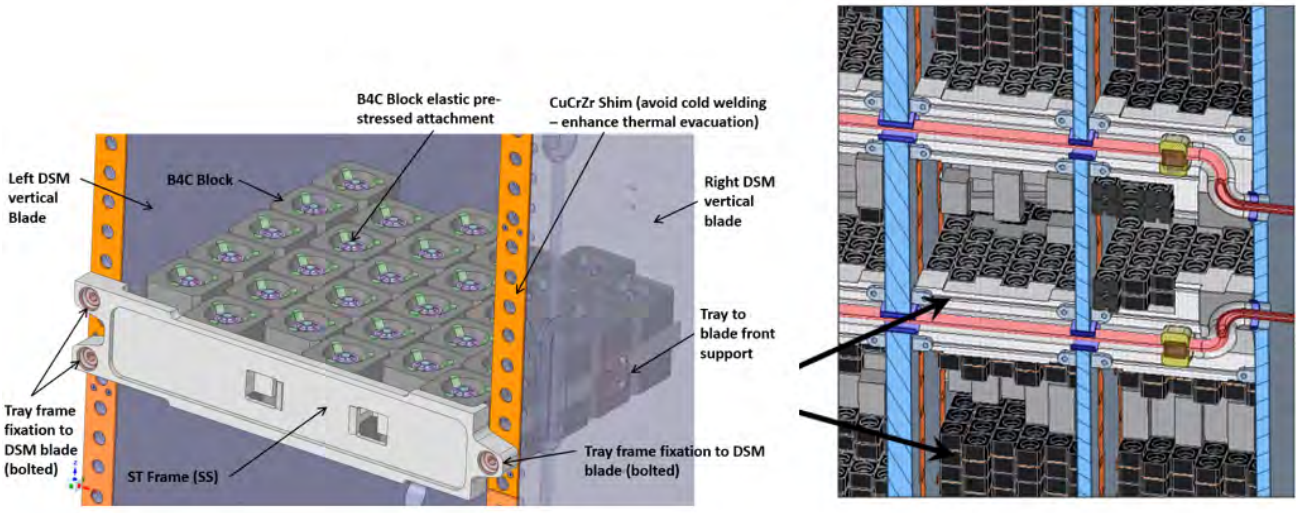

Figure 3: Installation of shielding trays on the DSM frame.

Under this contract, the Contractor is responsible for the supply of products meeting material specifications and manufacturing requirements set out in this Technical Specification of shielding trays frames for IO Equatorial and Upper Port Plugs.

5.2 Responsibilities

The responsibilities between the Parties for the execution of this contract are summarised in Table 7 (below) and are further detailed in the following sections.

Activity	Client (IO)	Contractor
Phase 1 Preliminary Design (if applicable)		
Preliminary Design		
Preliminary Design Review		
Phase 2 Final Design (if applicable)		
Final Design		
Final Design Review		
Phase 3 Material Procurement, Manufacture, FAT and Delivery to IO Site		
Manufacturing Readiness Review	**A**	**R**
Material procurement	**A**	**R**
Manufacturing	**A**	**R**
Factory Acceptance Testing	**A**	**R**
Packing and Delivery to the IO Site	**A**	**R**
Phase 4 Assembly, Integration & Acceptance		
Provisional Acceptance of Phase-3 deliverables		
Assembly of in-vessel components		
Technical Support to Integration		
Integration of balance tenants at IO Site		
Assembly Acceptance Testing at IO Site (of in-vessel modules)		
Testing Readiness Review		
Technical Support to Testing		
Integration Acceptance Testing at IO Site (of tenants)		
Final Acceptance		

Table 6: Summary of responsibilities between the Client (IO) and the Contractor
R = Responsible for organizing, performing and for the content
A = Review/Comment/Accept/Approve

5.3 Structure of the Technical Specification

- This Technical Specification (TS) constitutes the main document in which the Scope of the basic supply of Shielding Tray Frame components is described. It contains the top-level requirements that are applicable to the Scope of Work. For traceability purposes and to ease the use of this Technical Specification, applicable requirements specified in this document are identified using the following nomenclature [B1_00_RQ_XXX] where “B1” refers to serial number of Appendix, “RQ” meaning requirement and XXX means the serial number of the requirement.

- The document General Management Specification for Service and Supply (GM3SS) [1] specifies the general requirements which shall be met with for the execution of this contract. This document [1] is a generic one giving the top-level requirements. Additional requirements deemed necessary are detailed in Section 14 of this Technical Specification, which shall be followed. For traceability purposes and to ease the use of this Technical Specification, applicable requirements specified in this Section are identified using the following nomenclature [GM3S_a.b.c_RQ_XXX] where a.b.c is the relevant section in the GM3S and XXX means the serial number of the requirement. In case if the requirements are to be added to an existing section, the section name is indicated as "a.b.c" and in case a new section must be added, "a.b.c" a new number is given.
- This Technical Specification is associated with other documents which are respectively referred to as "Annexures", "Appendices", "Applicable IO Documents", Applicable Codes and Standards and "Reference IO Documents".
- The Appendices are named using the following convention: "Appendix B1_YY" where YY is a number which identifies the serial number of the appendix. They develop the different subsections in which the technical requirements of the main TS document are defined and specified in the form of top-level requirements.
- The Appendices are mandatory documents. They serve the purpose to explain the different stages and aspects of the manufacturing process and define in a much more detailed way the specific requirements that shall be applicable during manufacturing stages.
- On each Mandatory Appendix the requirements are defined and numbered following the nomenclature: [B1_YY_RQ_XXX] where YY identifies the number of the Mandatory Appendix and XXX means the serial number of the requirement.
- "Applicable Documents" are documents that contains applicable requirement for the execution of the contract, are listed under Article 4.1.
- "Reference Documents" are documents that are not mandatory but serve as a guideline, are listed under Article 4.2.
- Applicable "Codes and Standards" are listed under Article 4.3.
- The list of (Mandatory) Appendices is given in Article 0.

5.4 Contract execution

5.4.1 Outline of Contract implementation and estimated duration

The Contract is scheduled to come into force in the 3rd quarter of 2025. The supply is foreseen in 4 batches until 2029. It covers the supply of shielding trays for 3 Equatorial and for 3 Upper Port Plugs. Shielding trays of these Port Plugs shall be shipped to the ITER Site for further assembly and integration by the IO, which is not in the scope of this contract.

The overall procurement cycle is divided, as mentioned above, into 4 main batches as shown in the following Table 8:

Shielding Tray Frames and associated components Delivery Plan at IO Site			
BATCH*	**Port Plug**	**Scope of manufacturing**	**Need dates at IO Site**
1	UP#4	As per Articles 4.5 and 6.0	30/04/2026
1	UP#5	As per Articles 4.5 and 6.0	30/09/2026
1	UP#6	As per Articles 4.5 and 6.0	31/03/2027
2	EQ#08	As per Articles 4.5 and 6.0	15/12/2027
3	EQ#02	As per Articles 4.5 and 6.0	15/04/2028

4	EQ#17	As per Articles 4.5 and 6.0	15/02/2029
*	*Each batch of deliverable can be one Task Order (minimum). These are in addition to other pre-manufacturing TO's (for example material procurement etc.)*		

Table 7: Contract organization in batches

5.4.2 Forecast Outline of Ordering for the Port Plug integration batches

The need dates of the respective deliverables specified above are based on the schedule of further activities at Port Integration Facility at IO. The detailed delivery schedule for each of the deliverable and the proposed schedule breakdown for the manufacturing from the tender phase until the delivery of the last item will be indicated at the time of placing the supply orders.

5.4.3 Time schedule

As part of the tender, the Contractor shall produce a detailed Schedule showing all phases of the Contract and showing how the overall IO Schedule above will be complied with.

6 Scope of work

6.1 Inclusions and exclusions in the scope of this contract

6.1.1 Items and Activities Included in the scope of work

[B1_00-RQ-001]

The Scope of Work of this Contract comprises the following:

- Procurement of raw materials for the manufacture of the deliverables, required mock-ups, trials, qualifications, jigs/fixtures, tooling etc., in compliance with the requirements of this generic Technical Specification, its Appendices listed in Article 4.4, its Applicable documents listed in Article 4.1 and in consideration of the Referenced documents listed in Article 4.2.
- The manufacturing of shielding trays frames made of austenitic stainless-steel meeting the requirements of the product procurement specifications. The final design will follow one of the two variants proposed in this Technical Specification that it is finally chosen and prescribed by the IO at the beginning of the contract.
- The assembly of shielding trays including supported B4C blocks, clamping of blocks parts, bolting and tray supporting from clamps. All the hardware required to conform the fully assembled tray will be supplied by the IO as free issued parts.
- Perform Factory Acceptance Tests (including dimensional for all the trays and assembly tests for 5 trays either of upper and equatorial Port Plugs) as prescribed in the Appendix B_06 and tender drawings of this Technical Specification. The assembly tests shall be done with the complete shielding tray including supported B4C blocks, clamping of blocks parts, bolting and tray supporting from clamps. All the hardware required to conform the fully assembled tray for testing will be supplied by the IO in the quantity required for completion of the testing.
- The assembly of the trays on a frame for delivery in which they are arranged following a sequence which is the same than the one that they will follow the assembled in the respective DSMs. The manufacturing and supply of transportation frames are part of the scope of this Technical Specification.

- Packaging and Shipment of the deliverables to the IO ensuring cleanliness preservation. The development and supply of specific tooling, transportation frames, instrumentation or any other device needed to ensure that these items are not damaged and that factory qualification conditions are preserved during the transportation and delivery.

[B1_00-RQ-002]

For all the tasks described above the following generic set of activities shall be considered during the execution of works:

- Creation and supply of Built-to-Print (BTP) drawings according to the 3D CATIA models including the manufacturing drawings complying with the requirements of Appendix B1_01.
- Manufacture of the components using established fabrication techniques under required Quality Systems with duly qualified personnel. All equipment shall be manufactured under a quality assurance plan, and with quality control, that shall follow specifically the requirements set out in this specification as well as the General Management Specification [1] of this contract.
- Production of conceptual design and manufacturing of drawings for jigs and fixtures (if needed) according to the Contractor's manufacturing scheme. Note that these jigs are not defined in this Specification but may be required according to the needs (for example, as restraints for the control of weld distortions, etc.).
- At the end of factory fabrication, delivery of an End of Manufacturing (EOM) report per item including certificates of compliance / release notes, justification/tracking of non-conformances and Client's acceptance through tracking sheets, as-built drawings (dimensions) and testing reports.
- Design and manufacturing of any part or component's handling and transportation tools for use within the factory of during the delivery (shielding trays racks) to the destination site of the items.

[B1_00-RQ-003]

The Scope of Work also comprises the following activities:

- Technical and Management reporting according to [1] and this specification.
- Full documentation of the complete manufacturing cycle with detailed written procedures and manufacturing sequences (forging, cutting, plate straightening, machining, cleaning, inspection, packing, handling and shipping, etc.).
- Qualification of other special manufacturing procedures required for the manufacturing of the components in the scope like machining or cleaning.
- Procurement of materials specified according to requirements and material specifications in Appendix B1_02.
- Quality Assurance, complying all the requirements set out in the Management Specification [1].

6.1.1.1 Brief description of the deliverables

The deliverables comprise integrated shielding trays, which include the tray stainless steel frame, the B4C (boron carbide) blocks, the clamping elements for the blocks, and the tray lateral supports. Under the scope of this contract, only the tray frame is to be manufactured; all other components, namely the B4C blocks, clamping elements, and lateral supports, will be free issued by the ITER Organization (IO).

[B1_00-RQ-004]

Two design alternatives are to be quoted independently. Only one design will be ordered after assessment of the technical and economic proposals by the IO.

[B1_00-RQ-005]

In Alternative 1 (Figures 4 and 5), the B4C blocks are secured horizontally using independent circular hollow bushings (supporting rings). These bushings are supplied together with the rest of the clamping elements.

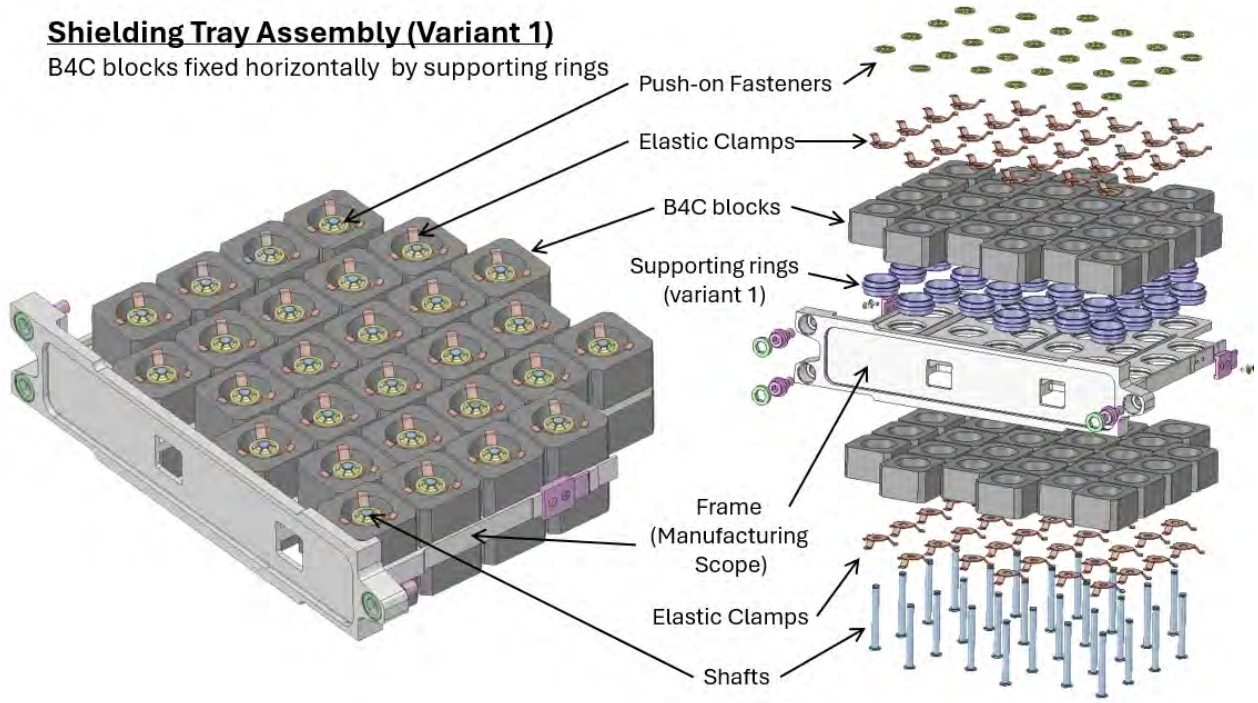

Figure 4: Assembly of a shielding tray following alternative design 1.

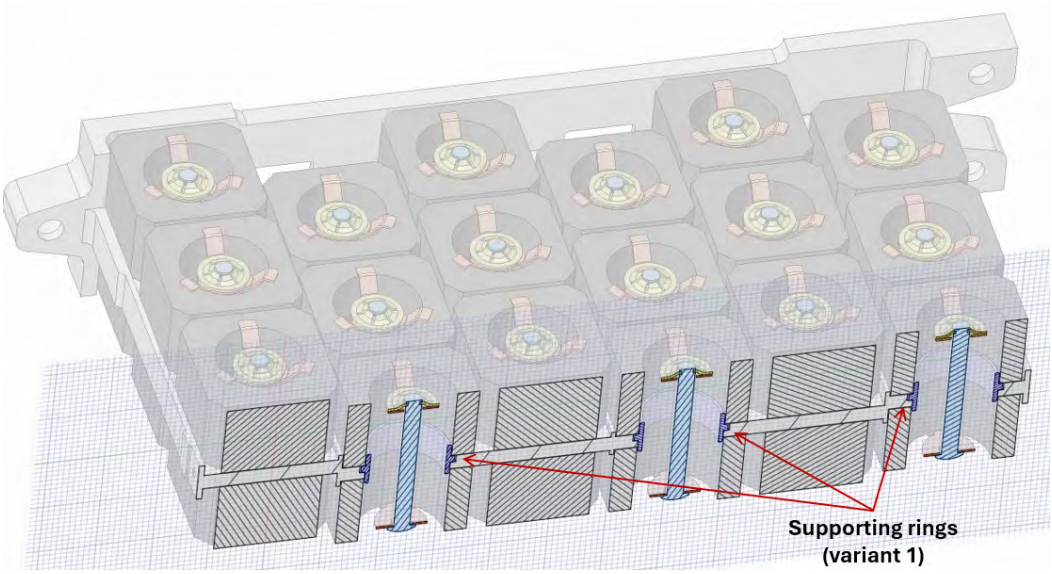

Figure 5: Detail of securing of B4C blocks following alternative design 1.

The frames shall include the internal machined slots for the supporting rings as shown in figure 6.

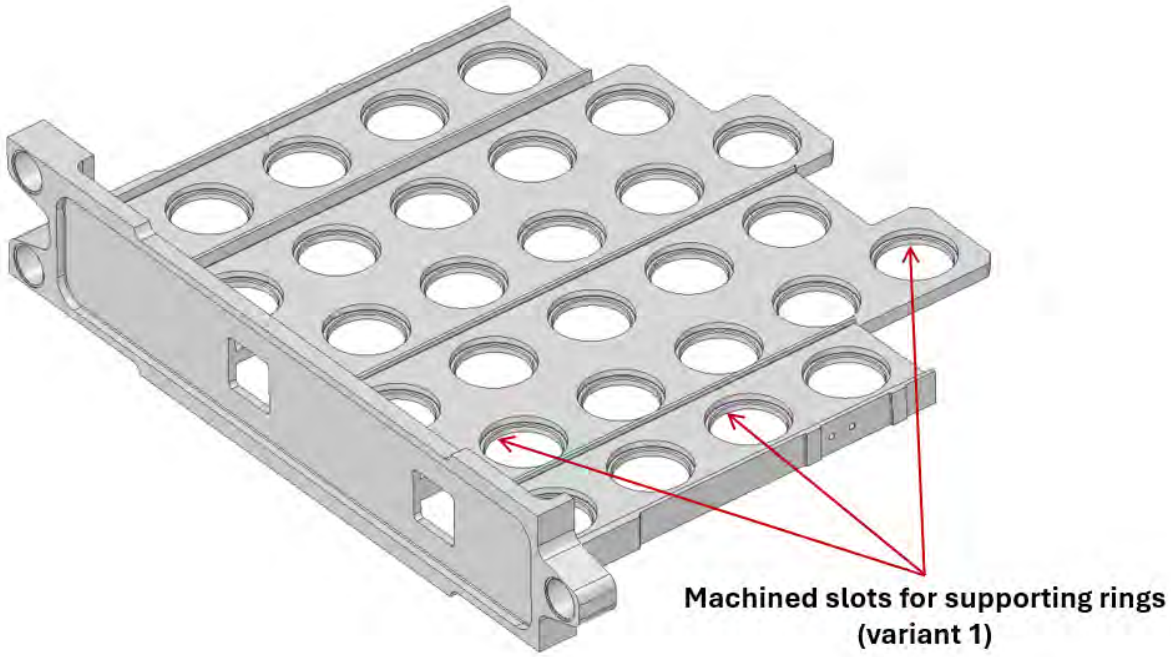

Figure 6: Detail machined slots on tray frames following alternative design 1.

[B1_00-RQ-006]

In Alternative 2 (Figures 7 and 8), the B4C blocks are fixed by means of three lips formed by circular sectors that are machined directly into both sides of the tray.

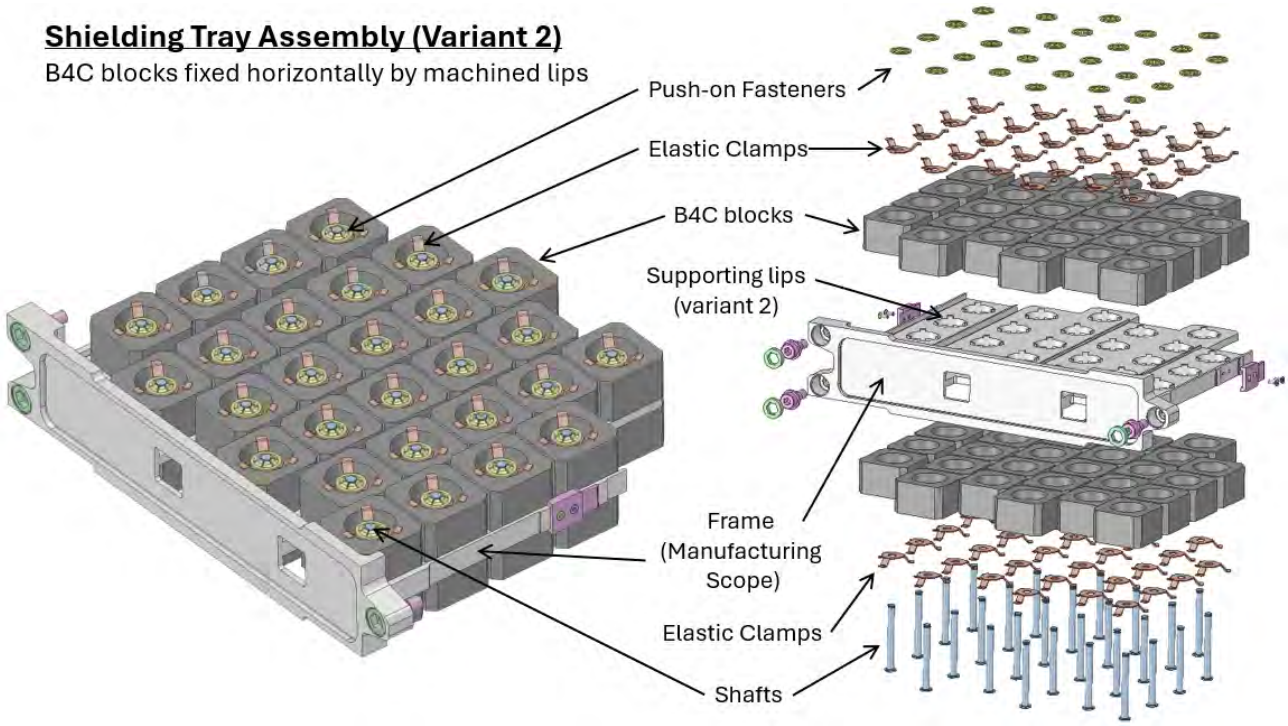

Figure 7: Assembly of a shielding tray following alternative design 2

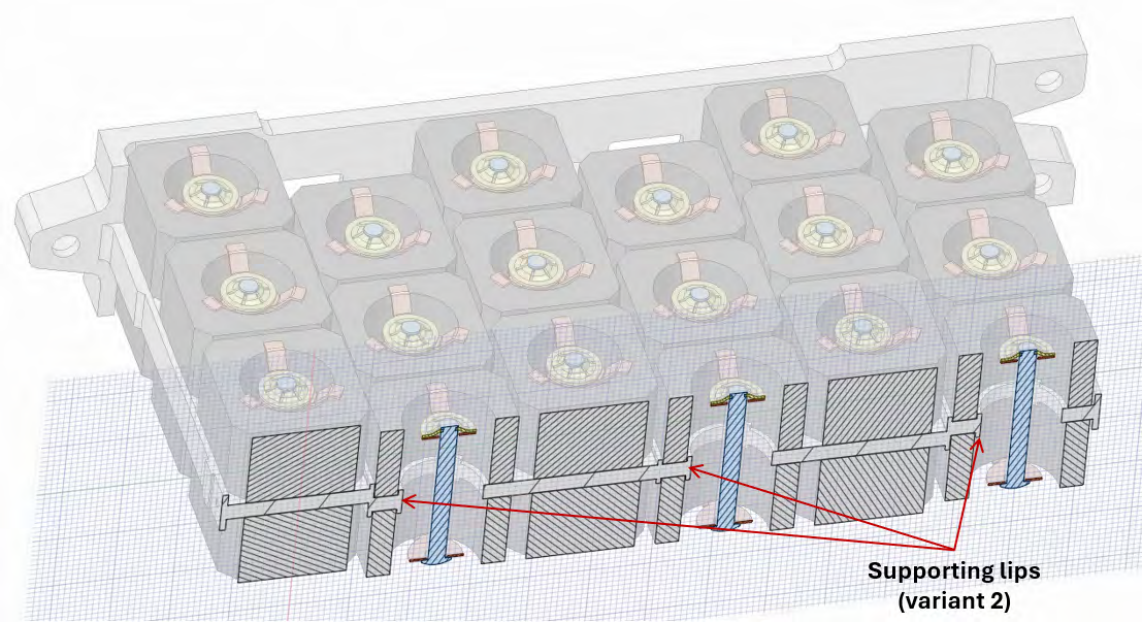

Figure 8: Detail of securing of B4C blocks following alternative design 2.

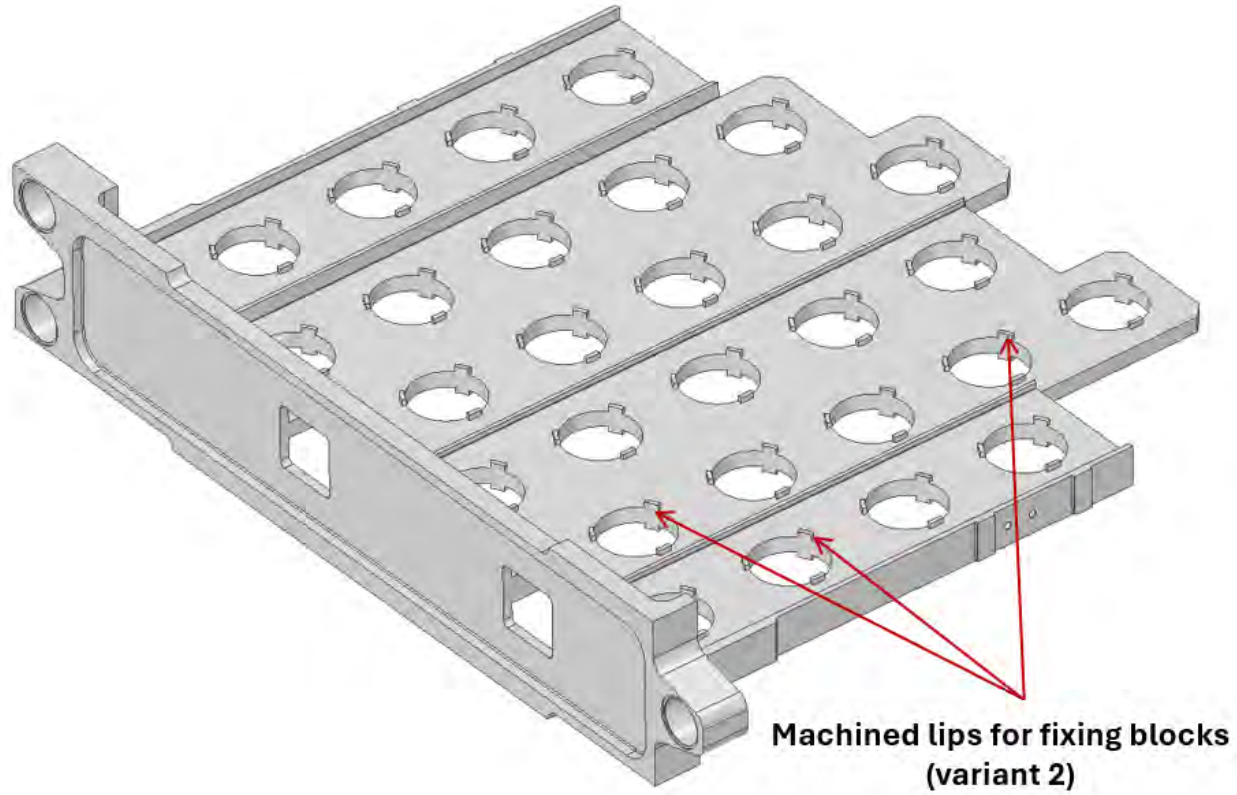

Figure 9: Detail machined circular lips on tray frames following alternative design 2.

6.1.2 Items excluded from the scope of work

[B1_00-RQ-007]

The Scope of Work does not include any assembly or integration activities not mentioned above. However, considering the final assembly requirements, the Contractor shall perform trial

assembly of the deliverables identified with critical dimensions/tolerances, at their facility before shipment so that they will not pose any problem during final assembly.

6.2 Procurement of materials

[B1_00-RQ-008]

The Contractor shall procure all the required raw materials needed for the qualifications, mock-ups & trials and manufacture meeting the requirements of mandatory Appendix B1-02.

6.3 Manufacturing of the components

[B1_00-RQ-009]

The final manufacturing sequence shall be defined by the Contractor and implemented in the Contract Management Plan (CMP) as described in Article 6.1.3 of the GM3SS [1]. The resultant documents shall be subjected to the Client's approval.

6.4 Documentation to be supplied during the execution of the contract

[B1_00-RQ-010]

The contractor shall use IO data bases, IDM for document review, IO MDB for MIP management and documentation, NCR DB for NCR management and SMDD for 2D drawings. This is explained further under Article 6.2 of [1] as well as Article 14.6.4 of this document.

[B1_00-RQ-011]

The general rules for documentation management are defined in the Management Specification [1]. The system specific documents and data to be provided to the Client are defined in the sub-sections 6.4.1 to 6.4.3 inclusive.

6.4.1 Documents to be issued prior to the manufacturing phase

[B1_00-RQ-012]

Prior to the commencement of the manufacturing stage a "Manufacturing and Inspection Plan (MIP)" as part of the CMP shall be produced by the Contractor in accordance with the requirements set out in the Management Specification [1]. It shall encompass the whole scope of the Framework Contract and range from review of drawings, verification of materials, manufacturing operations, inspection and test to delivery.

6.4.2 Documents to be issued during the manufacturing phase

Documents to be produced by the Contractor during the manufacturing phase are classified into four different categories.

6.4.2.1 Technical manufacturing documents during execution of the contract

[B1_00-RQ-013]

Technical manufacturing documents comprise all documents pertaining technical aspects of the manufacturing phase. Those documents shall be produced by the Contractor thorough the manufacturing stage. They cover but are not limited to the following:

- BTP drawings including manufacturing drawings.
- Documents related to material procurement activities.
- Documents related to general fabrication processes (marking, machining, forming, cleaning, handling, etc).

- Documents related to welding operations.
- Documents related to examination.
- Documents related to inspection.
- Documents related to testing.
- Documents related to packing, shipping and storage.

6.4.2.2 Follow-up documents during the execution of the contract

[B1_00-RQ-014]

The follow-up of the manufacturing stages shall be documented through regular monthly reports on the manufacturing status to summarize the implementation of contract. These reports shall be produced in accordance with the Management Specification of the Framework Contract. Any delays, manufacturing problems, and alternative manufacturing methods deviating from the plan presented at the readiness review meeting shall be included.

6.4.2.3 Non-conformance and deviation documents

[B1_00-RQ-015]

Any divergence from the original specification for the works shall be documented by the Contractor and approved by the Client through non-conformance and deviation reports in accordance with the provisions set out in Management Specification of the Framework Contract. The NCRs shall be initiated, processed and closed in the NCR Database, as explained further in this specification.

6.4.3 Documents to be issued at the end of the manufacturing phase

Along with all the deliverables, the Contractor shall provide the following documents:

6.4.3.1 As-Built documentation

[B1_00-RQ-016]

As-Built CAD 2D drawings and 3D models that are part of the ADP files, including the outcomes of the final factory acceptance dimensional control.

6.4.3.2 The Contractor's Release Note (CRN)

This is a control document that:

- Identifies the applicable requirements.
- Certifies that the equipment/service complies with these requirements.
- Records the status of the documentation.
- Highlights any outstanding obligation.

[B1_00-RQ-017]

This document shall be produced before the shipment, according to the requirements set out in the "ITER Requirements Regarding Contractors Release Note" [6].

6.4.3.3 End-of-Manufacturing report

The End-of-Manufacturing report lists all the documents produced during the fabrication phase and which demonstrate that the finally achieved quality of the components is acceptable according to the Quality Requirements defined in this Technical Specification.

[B1_00-RQ-018]

The End-of-Manufacturing report shall comprise at least the following (other additional documents required to demonstrate the level of quality achieved during the manufacturing phase may be necessary):

- The Contractor's Release note (Certificate of Compliance).
- Documents related to procurement including material certificates, product qualification reports, etc...
- Manufacturing procedures including the qualification reports of special manufacturing techniques.
- Extracts from examination and test procedures including the qualification of examination techniques.
- Examination and test results.
- Final factory acceptance test reports.
- Shipping and delivery documents.
- Non-conformance reports.
- As built drawings.
- The final Contract Quality Plan including:
- The Contractor's Quality Management System for the Contract.
- The Contract Management Plan (CMP).
- The final (as built) Detailed Work Schedule.
- The final (as built) Manufacturing and Inspection Plan.
- The final Documentation Schedule.
- The final Subcontracting Schedule.
- The final Risk Register.
- A compilation of all Contract meeting minutes and reports.
- Final IP Report summarizing the information on IP provided foreground IPR declaration.

7 Technical Requirements

7.1 Applicable documents, codes and standards

[B1_00-RQ-019]

In general sense manufacturing methods and procedures shall follow the reference code RCC-MR 2007 for class 2 box structures in consistency with the document "Codes and Standards for ITER Mechanical Components" [3].

[B1_00-RQ-020]

If a standard other than a European standard is proposed to be used, it shall be with the approval of IO. The contractor shall propose with suitable technical justification for using this standard.

[B1_00-RQ-021]

For all dimensional characterization activities, the "ITER Dimensional Metrology Handbook" [5] shall be applied as well.

[B1_00-RQ-022]

EN, ISO and ASTM Standards referenced in any of above-mentioned Codes and Standards shall also be considered as complementary applicable documents with regards to manufacturing requirements.

[B1_00-RQ-023]

EN, ISO and ASTM Standards mentioned in this TS shall be considered in their latest version at the time of the signing of the contract.

[B1_00-RQ-024]

In case of change of edition year or issuing standard, which supersede above mentioned, the use of new Standards is allowed only in case of demonstration of equivalency with prior written Client's approval.

[B1_00-RQ-025]

The use of EN but non-NF Standards is also allowed demonstrating equivalence with the corresponding NF version of the Standard.

[B1_00-RQ-026]

Other equivalent national or international Standards and Codes proposed by the Contractor may be acceptable with prior written Client's approval, provided conformity assessment to all criteria is satisfied.

As a general rule, in case of discrepancy between requirements in RCC-MR 2007 (or referenced Standards) and IO-specific Codes, the later ones shall prevail.

Nevertheless, reference Codes and Standards are established in a more detailed way (including applicable exemptions or prevalence rules) for every set of requirements included in mandatory appendixes of this Technical Specification.

[B1_00-RQ-027]

An Inspection entity selected by the Client may be used to ensure manufacturing compliance with the RCC-MR 2007 and additional requirements stated in this Technical Specification

7.2 Manufacturing Design Requirements

Engineering models at final design maturity, together with drawings needed for visual verification (e.g. general assembly drawings, dimensions, interface tolerances, etc.), shall be provided by the Client at the time of contract placement.

[B1_00-RQ-028]

A Manufacturing Plan shall be developed by the Contractor through the following steps:

- Before starting the manufacturing design, the Contractor shall propose the manufacturing route to be followed described in a document; *The top-level manufacturing plan*, that shall be submitted to the Client for approval.
- The Contractor shall prepare the draft Final Manufacturing models and drawings implementing the proposed and approved manufacturing approach. The draft Final Manufacturing models shall be checked and approved/accepted by the Client as well.
- The Contractor shall prepare the Final Manufacturing drawings based on the approved/accepted draft Final Manufacturing models.
- The Contractor shall prepare all manufacturing procedures and qualifications based on the Final Manufacturing drawings and the Top-Level Manufacturing plan to be reviewed in a Manufacturing Readiness Review (MRR) prior to the manufacturing start.

[B1_00-RQ-029]

Concerning CAD design activities, the Contractor shall ensure that all designs, CAD data and drawings delivered to the Client comply with the "Procedure for the Usage of the ITER CAD

Manual" [7], and with the "Procedure for the Management of CAD Work and CAD Data (Models and Drawings)" [8].

7.3 Material Requirements

7.3.1 Material Procurement

[B1_00-RQ-030]

Material procurement shall follow the general requirements applicable to material procurement activities under RCC-MR 2007 Code.

Requirements related to the metallic materials procurement included in RCC-MR 2007 that are applicable in the scope of this Technical Specification are described in Appendix B1_02.

Material traceability and approval requirements are also included in aforementioned appendix.

Some of the Materials are required to be procured meeting the impurity requirements specified as per [34]. Detailed requirements are provided in the respective product procurement specifications given in Mandatory Appendix B1_02 and associated Annexures.

7.3.2 Base Material

[B1_00-RQ-031]

The Contractor shall procure material in accordance with Product Procurement Specifications (PPSs) and shall provide certificates which comply with the requirements defined in Appendix B1_02 of this Technical Specification.

PPSs including all requirements that are applicable to different material products that take part on the manufacturing of Shielding Tray Frame Components are included in annexes of Appendix B1_02.

Additional requirements regarding product qualification when it is required are also stated in the aforementioned Appendix.

7.4 Classification of Shielding Tray Frame Components

This Article outlines the different classifications [R1, R2 & R3] regarding safety, quality, vacuum, and alignment & metrology applicable to the Shielding Trays.

Component	Safety Class	Safety function	Quality Classification	Vacuum Classification	A&M Class
B4C Shielding Trays	NSC	NA	QC1	VQC-1B	1

Table 8: Classification summary of Shielding Tray Frame components.

7.4.1 Safety classification

DSMs as In-Vessel Components are classified as non-SIC (NSC) components meaning that they are not credited in the safety analysis of the plant. Same consideration is given to its internals and more specifically to the B4C Shieling Trays.

7.4.2 Quality Assurance Classification

Attending to the functional risk and the economic impact of their failure on the ITER machine performance and availability, DSMs are classified as QC-1.

[B1_00-RQ-032]

The Contractor shall consider STs as QC-1 components as defined in [R3] in their manufacturing procedures as well as in the application of the requirements included in the Technical and Management Specifications.

7.4.3 Vacuum classification

Shielding Trays are surrounded by the Vacuum Vessel primary vacuum and therefore they are classified as VQC-1B as they do not form any vacuum boundary. Vacuum classifications have been performed according to [4].

[B1_00-RQ-033]

The Contractor shall consider Shielding Trays as VQC-1B components as defined in [4] in their manufacturing procedures as well as in the application of the requirements included in this Technical Specification.

7.4.4 Alignment & Metrology (A&M) classification

Alignment & Metrology (A&M) classification is discussed in the "ITER Dimensional Metrology Handbook" [5] which outlines the requirements for dimensional control of the components, assemblies and systems for the ITER machine.

Manufacturing related requirements for A&M class 1 component defined in the "ITER Dimensional Metrology Handbook" [5] are included in this Technical Specification when applicable.

[B1_00-RQ-034]

The Contractor shall consider Shielding Trays as A&M class 1 component as defined in the document "ITER Dimensional Metrology Handbook" [5] in their manufacturing procedures as well as in the application of the requirements included in this Technical Specification.

7.5 CAD activities and engineering drawings

CAD activities within the scope of the Framework Contract are managed through the System for the Management of Diagrams and Drawings (SMDD) which is the single common IO repository for all Diagrams and Drawings in pdf format.

[B1_00-RQ-035]

CAD related activities within the scope covered by this Technical Specification shall follow the requirements in Appendix B1_01.

Engineering drawings and other documents of this Technical Specification define the fundamental design dimensions, tolerances and related requirements as a result of the design cycle carried out to achieve a suitable final design of Shielding Trays. These engineering drawings specify final dimensions of the components at the reference temperature of 20˚C without taking into account mechanical deformation under self-weight.

7.6 Manufacturing requirements

7.6.1Cleanliness and vacuum quality requirements

Cleanliness is required during the whole manufacturing process and the preservation of cleanliness is a good practice for any component to achieve the necessary vacuum and quality standards and to minimise the time required for recovery from any contamination incident.

All components must be subjected to a rigorous cleaning procedure, consistent with the Vacuum Classification.

[B1_00-RQ-036]

Operations relating to cleaning, inspection, protection and preservation, shall be performed in accordance with the requirements specified Appendix B1_04 of this Technical Specification.

[B1_00-RQ-037]

Cleaning and cleaning checks shall be performed at several stages of assembly and manufacturing. Surface finish plays a major role to ensure adequate cleaning after machining. Cleaning procedure must be established to ensure needed cleanliness requirements, especially in locations where accessibility is difficult and a possibility for local spots having unacceptable surface finish requirements exists.

7.6.2 Surface finish requirements

Surface finish requirements stated in section 8 of the “ITER Vacuum Handbook” [4] for VQC-1 components shall be applicable to Shielding Tray Frame components.

Detailed requirements are also specified Appendix B1_04. This Technical Appendix includes additional requirements related to the vacuum performance of the Shielding Tray Frame components.

[B1_00-RQ-038]

Requirements defined in Appendixes B1_04 and B1_08 concerning surface finish for vacuum performance of vacuum exposed surfaces of Shielding Tray Frame components shall be met.

7.6.3 Machining requirements

Machining operations involve operations pertaining cutting and machining.

[B1_00-RQ-039]

Requirements on aspects like tolerances, surface finish conditions, cleaning and machining vacuum compatible fluids and applicable non-destructive examination are covered among others in Appendix B1_04 of this Technical Specification. They shall be observed.

[B1_00-RQ-040]

Cutting and machining operations and its qualifications shall be performed by qualified personnel using qualified procedures in accordance with specified requirements. This covers all the activities concerned, including DT and NDT.

7.6.4 Requirements related to special manufacturing processes

[B1_00-RQ-041]

Special manufacturing processes other than those covered in previous sections and that may affect the quality of items shall be controlled by the development and use of specific procedures

and by training personnel in these procedures. Such procedures shall be subjected to the Client's approval before application in the context of manufacturing activities of this Contract.

[B1_00-RQ-042]

Procedures for performing processes must be followed to ensure the consistency of the process.

[B1_00-RQ-043]

Special processes shall be performed by qualified personnel using qualified procedures in accordance with specified requirements. This covers all the activities concerned, including DT and NDT.

7.6.5 Metrology and tolerances

[B1_00-RQ-044]

During the different stages of the Shielding Tray Frame components manufacturing several dimensional controls shall be required.

Such inspections could be carried out by traditional linear measuring systems (e.g. meter, caliber, micrometer, thickness gauge) or by 3D dimensional inspection equipment (e.g. CMM, laser tracker, laser scanner, photogrammetric).

[B1_00-RQ-045]

Additionally, a final factory acceptance dimensional inspection shall be carried out after completion of each Shielding Tray frame.

The ITER Dimensional Metrology Handbook (DMH) [5] outlines the requirements for dimensional control of the components, assemblies and systems for the ITER machine. In addition, the handbook provides significant guidance and helpful information on best practise for large volume metrology applications.

Machine components and plant systems requiring alignment and/or dimensional control shall be given an Alignment and Metrology (A&M) classification, as reported in this Technical Specification. The classification reflects the importance placed on A&M for the System to function and the consequence of failure on the project.

The requirements to follow during the execution of dimensional controls on Shielding Tray Frame components as well as particular requirements related to the dimensional control for final factory acceptance are defined in Appendix B1_05 of this Technical Specification which is devoted to organizing dimensional inspections activities on base of the object to inspect, time of inspection and accuracy required.

They include general requirements applicable to dimensional inspection activities according to reference documents, Codes and Standards, particular requirements applicable to specific measuring methods, requirements related to measurement equipment calibration and traceability assurance and additional requirements regarding qualification of dimensional inspection personnel as well as reporting.

[B1_00-RQ-046]

Requirements in Appendix B1_05 concerning dimensional control conditions, equipment, their calibration and certification, etc.; shall be applied during the different stages of the manufacturing of Shielding Tray Frame components where required according to the Top-Level Manufacturing Plan delivered by the Contractor ([B1_00-RQ-012]).

8 Location for Scope of Work Execution

[B1_00-RQ-047]

The scope of work involves Manufacturing to be carried out at the facility of the Contractor or their approved subcontractor(s).

9 Free Issued Materials

In addition to the manufacturing of the stainless-steel frames for the shielding trays, the scope of this contract also includes the assembly of the shielding trays. This involves:

- The installation and fixation of B4C blocks using various clamping components.
- The installation of front tray supports.

[B1_00-RQ-048]

All hardware components required for the assembly will be free issued by the IO. These components include:

Components for B4C Block Clamping - Number of set same of blocks pairs per tray (figures 4 to 9):

- Pair (x2) of B4C blocks.
- Pair (x2) of Stainless-steel elastic clamps for securing the B4C blocks to the tray frame.
- Stainless-steel shafts for mounting the elastic clamps.
- Stainless-steel push-on fasteners to pre-stress each pair of B4C blocks against the tray frame.
- Pair (x2) of CuCrZr supporting rings for B4C blocks (only in case of alternative 1 is chosen).

Components for Front Tray Support Installation - 2 sets per tray (figure 10):

- CuCrZr clamping parts.
- Pair (x2) Vacuum-compatible stainless-steel fixation bolts.

Components for Tray Assembly to Vertical Blades – 1 set per tray (figure 10):

- Three (x3) CuCrZr clamping parts.
- Pair (x2) Vacuum-compatible stainless-steel fixation bolts.

The IO will supply all components in the quantities required for the complete assembly of all trays, along with a provision of spare parts.

The exact quantities per port, as well as the rack configuration (trays distribution for storage and delivery), will be specified in the Supply Orders issued for each individual port.

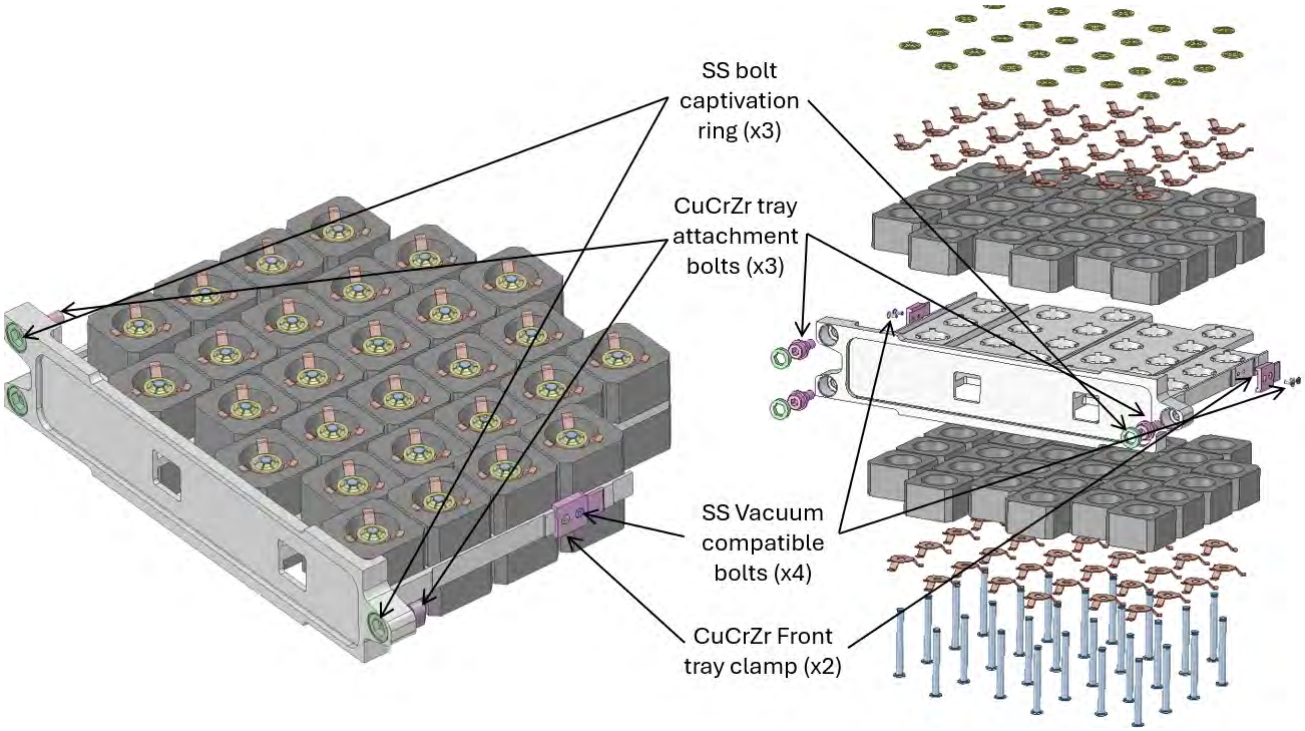

Figure 10: Front tray support and trays attachment to blades hardware (free-issued for assembly).

10 List of Deliverables

[B1_00-RQ-049]

The following table gives a broad list of deliverables and the need dates at IO PIF Site. Confirmed dates and detailed deliverables will be also described in the Supply Orders of this contract.

Ref.	Equipment / Part Description*	Part Num.	Need Date
1	Assembled Shielding Trays Rack for UP#4 PP	UPP#4	15/08/2026
2	Assembled Shielding Trays Rack for UP#5 and UP#6 PPs	UPP#5/#6	30/11/2026
3	Assembled Shielding Trays Rack for EQ#8 PP	EPP#8	30/11/2027
4	Assembled Shielding Trays Rack for EQ#2 PP	EPP#2	31/03/2028
5	Assembled Shielding Trays Rack for EQ#17 PP	EPP#17	31/01/2029

Table 9: Need dates for the different batches of B4C blocks.

To meet these proposed dates, the following delivery dates for free issued components is proposed (Table 10).

Ref.	Equipment / Part Description*	Part Num.	Est. Del. Date
1	Free Issued Hardware for Trays of UP#4 PP	UPP#4	01/03/2026
2	Free Issued Hardware for Trays of UP#5 and UP#6 PPs	UPP#5/#6	31/07/2026
3	Free Issued Hardware for Trays of EQ#8 PP	EPP#8	15/02/2027
4	Free Issued Hardware for Trays of EQ#2 PP	EPP#2	30/06/2027
5	Free Issued Hardware for Trays of EQ#17 PP	EPP#17	31/03/2028

Table 10: Estimated delivery dates for the free issued hardware of assembled shielding trays.

11 Delivery

11.1 Requirements for labelling, cleaning and cleanliness preservation, packaging, handling, shipment and storage

11.1.1 Scope of application

The following generic requirements shall apply for the shipments of shielding trays racks of the port plugs from the place of manufacture to the IO Port Integration Facility or for the shipments from the manufacturer's site to any intermediate site.

Suitable precautions shall be taken to avoid damage to the equipment. The components shall be fitted with the required accelerometers or other sensors and shall be packed as defined below.

The equipment shall be subject to control and inspection, as defined below.

[B1_00-RQ-050]

Requirements related to final cleaning, storage conditions, packing, handling, transportation, shipping and unpacking of Shielding Tray Frame components are defined in appendix B1_08 of this Technical Specification. They shall be observed.

11.1.2 Labelling and Traceability

[B1_00-RQ-051]

All trays frames shall be clearly marked in a permanent way and in a visible place with the IO official numbering system according to the document "ITER Numbering System for Components and Parts" [9] and requirements stated Appendix B1_08. All the process of marking and the materials used shall be vacuum compatible and compliant to the ITER Vacuum Handbook.

11.1.3 Cleaning and Cleaning Preservation

During cleaning, particular attention shall be given to the removal of weld spatter, debris and other foreign matter.

[B1_00-RQ-052]

Final cleaning shall ensure effective cleaning without damage to the surface finish, material properties or metallurgical structure of the materials in accordance to requirements of Article 5 of Appendix B1_04. They shall be observed.

[B1_00-RQ-053]

The demonstration of meeting the above cleaning requirements represents a Hold Point (HP).

11.1.4 Packaging and Handling

Any special Client's or regulatory transportation requirements shall be documented and provided to the Contractor prior to shipment.

[B1_00-RQ-054]

The Contractor shall design and supply appropriate packaging, adequate to prevent damage during shipping, lifting and handling operations according to requirements in Article 9 of Appendix B1_08.

[B1_00-RQ-055]

Each shipment shall be accompanied by a Delivery Report shall be prepared by the Contractor and signed by a representative of the Client and its Contractor.

11.1.5 Shipment, Transportation and Delivery to IO Port Integration Site

[B1_00-RQ-056]

Before delivery, the contractor shall do the Delivery Readiness Review. Some activities that need to be performed by Contractor at IO Site (for example integration of diagnostic tenant systems etc.,) will be agreed and recorded.

[B1_00-RQ-057]

Shielding Tray Frame components shall be delivered to IO Port Integration Site following DAP Incoterms.

[B1_00-RQ-058]

Before the shipment, a Release Note shall be prepared in accordance with the "ITER Requirements Regarding Contractor's Release Note" [6] and approved by the Client.

Upon receipt of the package, the Client shall open the package and make a visual inspection of its content.

In the case of anomalies, the Client shall make any additional relevant remark on the inspection.

A decision on acceptance of the delivery of the components will be made by the Client.

If the components are in an acceptable condition, the Client will sign the Delivery Report.

[B1_00-RQ-059]

The signature of the Delivery Reports shall be Hold Point (HP).

12 Inspection, Examination and testing

During the different stages of the manufacturing activities of the shielding trays frames, several dimensional inspections and testing operations shall be required in order to provide demonstration of compliance with requirements of this Technical Specification.

[B1_00-RQ-060]

Dimensional inspections operations and methods shall be subjected to the requirements defined in Appendix B1_05 of this Technical Specification.

[B1_00-RQ-061]

Inspection and testing operations will be listed in the MIPs.

[B1_00-RQ-062]

The Contractor and Subcontractors shall supply procedures regarding all testing operations, for approval by the Client.

12.1 Examination and tests

12.1.1 Mechanical tests

Mechanical tests include all tests to be performed in raw materials particularly metals and alloys that are intended to the determination of the mechanical properties.

These mechanical properties allow evaluating such materials for strength and quality to ensure safety towards their end-use.

They include:

- Tensile tests
- Bend tests
- Charpy impact tests.

- Hardness tests.

[B1_00-RQ-063]

Technical requirements pertaining mechanical tests defined in section 4.2 of Appendix B1_06 shall be applied.

12.1.2 Physical, physicochemical and chemical tests

These analyses are intended to characterize the metallurgical characteristics of materials, chemical composition, microstructure and ferrite content.

They comprise:

- Determination of metal structure.
- Grain size and inclusion content measurement.
- Ferrite content measurement.
- Chemical composition determination.
- Magnetic permeability tests

[B1_00-RQ-064]

Test conditions, requirements, dimensions of specimens, sampling methods, dimension and location of test specimens and other particularities related to these tests defined in section 4.3 of Appendix B1_06 shall be followed.

12.1.3 Non-Destructive Examination

[B1_00-RQ-065]

Non-destructive examinations and tests shall be carried out using approved procedures in accordance with requirements defined in section 4.4 of Appendix B1_06.

12.1.3.1 Surface examination

[B1_00-RQ-066]

All the machined surfaces shall be examined with both visual and liquid dye penetrant techniques for crack detection using approved procedures.

According to the “ITER Vacuum Handbook” [6] the use of liquid dye penetrant techniques for crack detection is not recommended when normal liquid dye penetrant inspection fluids are used. Therefore, only the use of the ITER vacuum qualified liquid dye penetrant (LDP) is permitted provided that cleaning is performed according to procedures qualified and approved by the IO.

12.1.3.2 Volumetric examination

[B1_00-RQ-067]

For volumetric testing UT examination can be used but subjected to Client’s approval.

In case that the single manual probe reflection method cannot be feasibly qualified due to technical reasons alternative automated techniques giving overall equivalent results can be proposed by the Manufacturer for approval and qualification according to in section 4.4 of Appendix B1_06.

12.1.4 Determination of surface finish conditions

[B1_00-RQ-068]

Requirements applicable to the procedures of determination of surface conditions to ensure a proper vacuum quality of Shielding Tray Frame components are set out in section 4.4.5 of Appendix B1_06. They shall be followed.

12.2 Final Acceptance Tests at the Manufacturing Site

[B1_00-RQ-069]

Apart from the dimensional control, several acceptance tests as defined in Appendix B1_7 of this Technical Specification shall be performed at the Manufacturer site prior to the delivery of these components. These shall comprise:

- Vacuum baking.
- Outgassing measurement.

[B1_00-RQ-070]

Client's factory acceptance criteria shall comprise the following:

- Identification of the components and parts in the Scope of Work.
- Approval of the End-of-manufacturing report by the Client and sign of the Certificate of Compliance.
- Successful completion of the final factory dimensional control (appendix B1_05).
- Successful completion of all acceptance tests (appendix B1_7).
- Control of stamping and marking of manufactured items (appendix B1_8).
- Checks of the final cleaning (appendix B1_8).
- Checks of packing provisions and the transportation plan to ensure that the integrity of the component is preserved until arrival at the site (appendix B1_8).
- Conformance with requirements as set out in the main Contract and this Technical Specification.

12.3 Acceptance Criteria

For each type of test, acceptance criteria and possible exemptions or alternative test are provided in Appendix B1_7 of this Technical Specification as well as a detailed description of manufacturing, quality and follow-up documents to be prepared before and after the tests have taken place.

[B1_00-RQ-071]

Test shall be considered as satisfactorily passed if acceptance criteria defined in Appendix B1_8 are met.

12.4 Provisional Acceptance at the IO Port Integration Site

[B1_00-RQ-072]

The deliverables of this contract after receipt at IO will undergo receipt inspection. It is required that further assembly and integration activities at PIF are accomplished by IO without any non-conformances attributable to these deliverables. The manufacturer shall plan for trial assemblies of those deliverables at his facility that need to be assembled meeting very precise dimensional requirements at final integration stage.

[B1_00-RQ-073]

The components shall be provisionally accepted by the Client from the moment that the components have been delivered, documented, and successfully tested in accordance with this Technical Specification. The Client will further on issue a Provisional Acceptance Certificate which will formalize and conclude the provisional acceptance process.

[B1_00-RQ-074]

The Certificate of Provisional Acceptance shall be signed by both the Client and the Contractor, after the acceptance of each component and its related documentation.

[B1_00-RQ-075]

Ownership of the components shall be transferred from the Contractor to the Client upon Provisional Acceptance at the Client Port Integrator Site.

[B1_00-RQ-076]

The transfer of ownership to the Client shall not relieve the Contractor of its obligations under this Contract and enforce the remedy of observed of non-conformities of the components during the warranty period.

[B1_00-RQ-077]

The Contractor shall bear the risk of loss or damages to the components during the execution of this Contract up to delivery (at the arrival of the components an inspection will be held to check and formalize eventual damage incurred during transport). Any risk of loss or damage shall be transferred from the Contractor to the Client upon delivery and Provisional Acceptance.

12.5 Final Acceptance

[B1_00-RQ-078]

The Contractor shall provide commercial warranty as per IO Supply Contract General Conditions covering repair or replacement of the components up to one year after the Provisional Acceptance of the item.

The Final Acceptance shall be granted upon expiry of the warranty period and when all defects or damages have been rectified.

[B1_00-RQ-079]

The Final Acceptance Certificate shall be signed by both the Client and the Contractor.

13 General Management requirements

13.1 Work Monitoring

[B1_00-RQ-080]

All the tasks listed in the MIP shall be grouped into several groups for manufacturing control and management tasks. Operations in the MIP comprise different fabrication activities that may in turn be converted into work packages (WP) which relate common or sequentially related activities from the point of view of the execution and control.

13.2 Time Schedule Management: The Detailed Work Schedule (DWS)

13.2.1 The Detailed Work Schedule (DWS)

[B1_00-RQ-081]

The Contractor shall produce a detailed work schedule (DWS) showing all phases of the Contract and explaining how the overall Client's schedule included in the Contract will be complied with. This Detailed Work Schedule shall be submitted to the Client for approval/acceptance, before starting any work in relation to the Contract.

[B1_00-RQ-082]

The DWS shall be in the form of a fully resourced programme based on the Work Breakdown Structure defined in the MIP identifying all significant milestones, deliverables, activities and their interdependencies, durations and anticipated start and finish dates and the project critical path(s), including sub-contractors' activities.

[B1_00-RQ-083]

For the DWS, activities shall be given in detail. It shall include resources (number and category) and milestones for witnessing along with control points (hold, notification points etc.,) and shall be sent in native format to the Client for approval.

13.2.2 Schedule requirements for Call-for-Tender / Framework Contract

[B1_00-RQ-084]

The Contractor must develop a fully logics-driven DWS showing all the phases to arrive to the acceptance of the deliverables.

[B1_00-RQ-085]

A full list of the assumptions adopted in the DWS explaining in detail the level of confidence considered shall be submitted as well.

[B1_00-RQ-086]

In case the Contractor arrives at the conclusion that it is not possible to deliver the final products on the time schedule required, he shall develop a longer DWS listing the reasons for it in detail.

[B1_00-RQ-87]

The activity names must be self-explanatory, i.e., they must also be properly understood without referring to the corresponding WBS entry.

[B1_00-RQ-088]

The Contractor shall also set out the process of reporting progress against the DWS to the Client.

13.3 The Documentation Schedule

[B1_00-RQ-089]

The Contractor shall provide a Documentation Schedule following the format defined in the template included in the Article 14 of GM3S[1] detailing all documents, records, drawings, plans, schedules, manuals and data relevant to the implementation of the Framework Contract, including work performed by Subcontractors, and the performance of the Works and the Contractor's other duties, obligations and liabilities pursuant to the Contract.

[B1_00-RQ-090]

The Contractor shall update the Documentation Schedule throughout the whole execution of the Framework Contract.

[B1_00-RQ-091]

The Documentation Schedule shall include at least the documents linked with main milestones and deliverables.

For the items linked with milestones and with specific deliverables, the use of a draft document lists shall be included in the document schedule. For every document from the list, identification of related activities in the DWS shall be included.

[B1_00-RQ-092]

During the execution of the activities, the Documentation Schedule shall be maintained as the reference for document status within the Contract.

[B1_00-RQ-093]

The documentation formats shall follow the requirements given in Article 14 of GM3S.

13.4 The Subcontracting Schedule

[B1_00-RQ-094]

The Contractor shall provide a Subcontracting Schedule according to the template provided in the Article 14 of GM3S:

- All major or critical items and activities to be subcontracted by the Contractor.
- Specifications of the associated items or activities to be performed.
- The identity of the relevant Subcontractor, including details of his contact officer.
- Proof of the Subcontractor's qualification, including for example ISO 9001 certification.
- Contractor's assessment report in respect of the subcontractor's quality system.

[B1_00-RQ-095]

Subcontracting shall not start until the relevant Subcontracting Schedule has been accepted by the Client.

[B1_00-RQ-096]

The Subcontracting Schedule shall be updated as necessary, and the updated schedule shall be subjected to the same acceptance procedure as the original Subcontracting Schedule.

[B1_00-RQ-097]

The Contractor shall not implement a revision of the Subcontracting Schedule until it has been approved by the Client in writing.

[B1_00-RQ-098]

Client's acceptance of the Subcontracting Schedule shall not relieve the Contractor of any contractual obligations and responsibilities.

13.5 Additional Project Management Requirements

Following are the requirements that are applicable in addition to those specified in the General Management Specification for Service and Supply (GM3S) [1].

13.5.1 Requirements of Section 6.1.3 (Contract Management Plan)

This applies in full along with the following additional requirements:

[GM3S_6.1.3-RQ-001]

The Contract Follow-up shall be performed through an assembly of separate and well-identified documents, the Contract Management Plan (CMP), which shall cover the whole Scope of the Framework Contract, including work performed by Subcontractors.

The CMP is a formal document in which it shall be described how the Contractor intends to execute their works. It shall identify the Scope of work, the organisational structure proposed; key processes which will be carried out and roles and responsibilities within the Contract.

[GM3S_6.1.3-RQ-002]

The CMP shall comprise of a main document and other subsidiary plans as detachable documents: the Manufacturing and Inspection Plan (MIP), the Document Schedule, the Detailed Work Schedule (DWS), the Contract Risk Register and the Subcontracting Schedule described in the sections above.

[GM3S_6.1.3-RQ-003]

The CMP main document shall include different Sections in which the Objectives, Activities and Responsibilities of the Contract shall be detailed according to what it is stated in following subsections.

These elements are not exhaustive and may be supplemented by the Contractor as considered appropriate.

[GM3S_6.1.3-RQ-004]

In this part of the CMP the Contractor shall describe his understanding of the nature of the works and requirements of the Framework Contract.

[GM3S_6.1.3-RQ-005]

It shall describe the strategy for execution of the works and shall include a description of the project's key drivers and details of the sequencing of key activities.

[GM3S_6.1.3-RQ-006]

This Section shall set out the Contractor's plan for resourcing the project.

[GM3S_6.1.3-RQ-007]

It shall include details of the Contractor's mobilisation plan and an organization chart identifying the resources, organisation and responsibilities allocated at senior and intermediate management level and the personnel appointed to these positions as well as defining the allocation of responsibilities between consortium members, if applicable.

[GM3S_6.1.3-RQ-008]

Particular reference shall be made to the provision of Suitably Qualified and Experienced Personnel (SQEP) to the project and a SQEP register for all significant positions within the Contractor's proposed organisation.

[GM3S_6.1.3-RQ-009]

Names shall be attached to key roles with evidence that they are Suitably Qualified and Experienced for the role.

[GM3S_6.1.3-RQ-010]

Significant subcontracts associated with the work shall be identified as well. The Contractor shall identify the names, experience and contact details of:

- The Contractor's Technical Responsible Person (TRP) in charge of the Framework Contract.
- The Contractor's Quality Representative for the Framework Contract.

[GM3S_6.1.3-RQ-011]

The Contractor's TRP shall be responsible for the provision of the Works including the planning, performance and control of all of the Works, and all work assigned to Subcontractors. He shall keep and maintain the DWS and time schedules and issue the progress reports.

[GM3S_6.1.3-RQ-012]

The Contractor's Quality Representative shall be responsible for ensuring that the quality requirements are met and that the Quality Plan, quality procedures and detailed work instructions are followed throughout the duration of the Framework Contract.

[GM3S_6.1.3-RQ-013]

The Contractor's Quality Representative shall assess and control the Management Quality System of his Subcontractors', including any works carried out at Subcontractors' premises.

[GM3S_6.1.3-RQ-014]

The Contractor shall not change or replace his TRP or Quality Representative without the prior agreement of the Client.

The Stop Work Authority (SWA) establishes the responsibility and authority of any individual to stop work when an unsafe condition or act could result in an undesirable event. The SWA process involves a stop, notify, correct, and resume approach for the resolution.

[GM3S_6.1.3-RQ-015]

The Contractor shall state his "Stop Work Authority" internal guideline.

[GM3S_6.1.3-RQ-016]

This guideline shall include that for stopped work associated with defined safety systems, notification shall be given to the Client explaining reason for stop work and proper justification for restarting that work activity

13.5.2 Requirements of Section 6.1.4.2 (Periodic Report) of GM3S

This applies in full along with the following additional requirements

[GM3S_6.1.4.2-RQ-001]

The Contractor shall provide the Client with a monthly progress report on the status of the activities under this Framework Contract by the 1st calendar day of the following month.

[GM3S_6.1.4.2-RQ-002]

The progress reports shall follow the format defined in the required format and contain all information that the Contractor considers relevant to properly reflecting the progress of the activities including but not be limited to:

- Progress of the works compared to the Detailed Work Schedule (DWS) including relevant pictures of stages of fabrication as a proof.
- Update of the Contract Schedule.
- Update on Intellectual Property Rights.
- Re-programmed activities required to recover time on any activities behind the Detailed Work Schedule.
- Deviations requested and Non-conformances raised.
- Work scheduled over forthcoming month.
- Materials Availability.
- List of personnel and category involved in each activity.
- Update of the list of documents and Documentation Schedule, including identification of the activities related with every document in the Schedule.

[GM3S_6.1.4.2-RQ-003]

All documents referenced in the Progress Reports shall also be submitted together with the Progress Reports in electronic format a minimum three (3) working days in advance prior to the date of Progress Meeting.

[GM3S_6.1.4.2-RQ-004]

The Contractor shall report as soon as possible to the Client of any occurrence that could delay or jeopardize the proper execution of activities related to this Framework Contract.

13.5.3 Requirements of Section 6.2 (Data and Document Management) of GM3S

This applies in full along with the following additional requirements.

[GM3S_6.2-RQ-001]

The exchange of all quality and technical documentation and information between the Client and the Contractor must be conducted through and between Client's Technical Officer responsible for the Contract and the Contractor's Project Manager [24].

[GM3S_6.2-RQ-002]

The Contractor shall describe their Documentation Management System.

[GM3S_6.2-RQ-003]

The Contractor shall be responsible for submitting all documentation relevant to the Contract in the Client's Document Management System (unless agreed otherwise).

[GM3S_6.2-RQ-004]

The Contractor shall represent the process for documentation flow in a detailed flowchart (including the internal review and approval and the interface with the Client).

[GM3S_6.2-RQ-005]

The Contractor shall issue, manage and control its documents and records in accordance with its QA Management System.

[GM3S_6.2-RQ-006]

The Contractor shall ensure that all documents and records are uniquely identified and traceable, including subsequent revisions, and are made accessible to the Client's authorized individuals.

[GM3S_6.2-RQ-007]

The Contractor shall prepare the following documents in the English language unless otherwise provided in this Framework Contract or unless the Client approves exceptions in the interest of rapid transmission:

- Manufacturing documentation as described in thi Technical Specification.
- Day-to-day correspondence and administration between the Parties.
- Monthly progress reports, including % progress achieved in that month.
- All documents that are necessary to determine the progress and status of work and validate the capabilities of involved Contractors.
- QA and Safety related documentation.
- All other documentation necessary to verify the sound management of the procurement under this Framework Contract.

All the quality control documents at the Contractor level (such as Work Instructions) need not be translated into English unless specifically requested by the Client.

[GM3S_6.2-RQ-008]

The Client shall have the responsibility for approving documents related to safety, interfaces, integration and ITER performance.

[GM3S_6.2-RQ-009]

The Contractor has responsibility for the documents requested by the Contract; therefore, the Contractor shall be responsible for getting any such document approved, before sending it to the Client.

[GM3S_6.2-RQ-010]

The Client shall return the documents requested by the Contract, such as shown with accepted or approved.

Documents sent for information require no further decision (neither acceptance nor approval). Comments can be sent where there is a serious, major issue on the content of the document.

[GM3S_6.2-RQ-011]

Unless specifically specified otherwise, the standard documentation review cycle shall include:

- The Client shall have ten (10) working days from the receipt of the Contractors' documents to review, comment and/or approve them.
- The Contractor shall have eight (8) working days from the receipt of commented documents to update and resubmit them to the Client.
- The Client shall have five (5) working days from the receipt of the Contractor's submission to review and return the documents.
- On submission of documents for acceptance: if no comments are made within the defined time frame, the document is deemed to be accepted by the Client.

[GM3S_6.2-RQ-012]

In case the Contractor has to revise the documents and data already submitted to the Client, the Contractor shall immediately submit them to the Client through the same submittal purposes as the originals until the documents and data become "As-Built" status.

[GM3S_6.2-RQ-013]

Documentation developed as the result of this Framework Contract shall be retained by the Contractor for a minimum of five (5) years and then may be discarded at the direction of the Client.

13.5.3.1 Data Management, Communication and Signatures

[GM3S_6.2-RQ-014]

The following methods of communication between the Client and the Contractor shall be followed depending on the context:

- Information: The standard method shall be electronically (email).
- Contract, Amendments and Guaranties: Formal communication with blue ink signature or qualified electronic signature.
- Acceptance/Rejection of a Deliverable, Deviations, non-conformities and other documents submitted by/to the Client: Email tracked through the Client's Documents Management System (IDM or MDB as the case may be).

[GM3S_6.2-RQ-015]

Apart from the above requirements, all data generated during the execution of the Framework Contract shall be handled electronically and entered into a Database of the Client's Documents Management System (IDM or MDB, as the case may be).

[GM3S_6.2-RQ-016]

The structure of this database shall be defined by the Client. The Contractor shall use this database to store information related to the Framework Contract.

[GM3S_6.2-RQ-017]

All data entered in the database shall be kept strictly confidential by the Client and, under no circumstances, shall be communicated or made accessible to other Contractors or interested parties.

[GM3S_6.2-RQ-018]

Relevant data shall be made available by the Contractor to the Client through the Client's Documents Management System (IDM or MDB as the case may be) each time a control point is requested, a Deviation Request, a Non-conformance report or any other document which is part of the Contract deliverables is issued by the Contractor, in accordance with the document Procedure on Procurement Documentation Exchange between IO, DA, and contractors [24].

This requirement does not apply for other documents and data files which are, for example, managed through specialized CAD software (e.g. CATIA, see System Design and others) and so undergo other requirements specified in the respective documents.

13.5.3.2 Quality Records

[GM3S_6.2-RQ-019]

Quality Control and Acceptance Test Records shall be maintained according to the procedures defined in QA Management System and applicable documents. Availability to the Client of the required data is a pre-requisite for granting Authorizations to Proceed and Hold Point clearances.

13.5.3.3 Mandatory Document Formats

[GM3S_6.2-RQ-020]

All communications and official documentation relating to the works shall be in English.

For monolingual documentation, the language shall be English.

[GM3S_6.2-RQ-021]

For dual-language documentation, such as regulatory or safety documentation the original and reference text shall be in English and all interpretations of it shall be based on the English text. In the event of a conflict between different translations, the English text will prevail.

13.5.3.4 Electronic Documents

[GM3S_6.2-RQ-022]

All information and documents shall be transmitted in electronic format, including those transmitted by hard copy.

[GM3S_6.2-RQ-023]

Where possible, editable versions of the deliverables shall be provided.

[GM3S_6.2-RQ-024]

The Contractor shall also maintain a register in spreadsheet format of all files issued identifying the current status of the each file throughout the duration of the Framework Contract.

13.5.3.5 File Names of Electronic Documents

[GM3S_6.2-RQ-025]

The convention to be followed in the naming of electronic document files shall be agreed between the Client and the Contractor.

13.5.3.6 Confidentiality

[GM3S_6.2-RQ-026]

For the purposes defined in the Framework Contract and its annexes, the Client shall have access to all the operational procedures and specifications required for the execution of the Contract, all the Contract performance test results, analysis and reports, Contractor's confidential intellectual property during related to the performance of the Contract and any service or product that flow from the performance of the Contract.

[GM3S_6.2-RQ-027]

If required, the Client's staff will sign a Non-disclosure Agreement or Confidentiality Agreement to be agreed in advance.

[GM3S_6.2-RQ-028]

Taking into account previous provisions, the Client shall not be prevented from accessing to the contractual performance documentation and records on the base of confidentiality or confidential intellectual property.

13.5.4 Requirements of Section 6.4 (Subcontracting) of GM3S

This applies in full along with the following additional requirements:

[GM3S_6.4-RQ-001]

The Contractor shall ensure that each Subcontractor of the whole chain of Contractors has a Quality System compliant with this Management Specification.

[GM3S_6.4-RQ-002]

The Contractor shall issue an assessment report for each Subcontractor of the whole chain of Contractors.

[GM3S_6.4-RQ-003]

Failing this, the Contractor shall undertake all the necessary actions to establish and maintain quality for each Subcontractor's activities and premises, in conformity with this Management Specification.

[GM3S_6.4-RQ-004]

The Contractor shall ensure that purchased or subcontracted items, services and materials are supplied together with their certificate of conformity to the specified requirements.

13.5.5 Requirements of Section 6.5 (Counterfeit Fraudulent Suspect Item) of GM3S

This applies in full along with the following additional requirements [29]:

Counterfeit, Fraudulent and Suspect items (CFSI) can be a significant issue in any supply chain or project. The impact can be wide-ranging and damage the environment, the social standing and the value of the asset.

[GM3S_6.5-RQ-001]

For identification of CFSI items the following guideline need to be followed and consulted by the stakeholders:

- A counterfeit item is a copy or substitute without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by the vendor, Contractor, distributor, or manufacturer.

- A fraudulent item that items which is intentionally misrepresented to be something they are not.
- A suspect item is one in which there is an indication by visual inspection, testing, or other information that it may not conform to established industry-accepted specifications or national/international standards.

13.5.6 Requirements of Section 8.1 (General Quality Requirements) of GM3S.

This applies in full along with the following additional requirements:

[GM3S_8.1-RQ-001]

The Contractor shall produce a **Quality Plan** structured as an assembly of 2 separate parts:

- A **System Compliance** part which shall comply with the General Requirements defined in Section 6 and Nuclear & Beryllium Safety defined in Section 5.3 and shall implement the associated procedures of GM3S.
- A **Contract Management Plan** (CMP) for the Contract follow-up according to the requirements set out in Section 6.1.3 of GM3S.

13.5.7 Requirements of Section 8.2 (Quality Plan) of GM3S

This applies in full along with the following additional requirements:

[GM3S_8.2-RQ-001]

The Contractor shall produce and submit to the Client on or before the Kick-Off Meeting the provisional Quality Plan developed from his preliminary plan submitted with his tender, all in accordance with the requirements set out in this Management Specification.

[GM3S_8.2-RQ-002]

The Contractor shall not commence the performance of other duties, obligations and liabilities pursuant to the Contract until the provisional Quality Plan is approved by the Client in writing, with or without comments.

[GM3S_8.2-RQ-003]

Within 14 days of receiving approval and / or comments from the Client on the provisional Quality Plan, the Contractor shall submit his final Quality Plan; incorporating the comments received from the Client.

[GM3S_8.2-RQ-004]

During the implementation of the Framework Contract, the Contractor shall revise the final Quality Plan, or parts of them when required, and shall submit such revisions to the Client for further approval.

13.5.8 Requirements of Section 8.4 (Requirement for Inspection Plan) of GM3S

This applies in full along with the following additional requirements:

[GM3S_8.4-RQ-001]

All the manufacturing and testing activity shall be through a documented plan.

[GM3S_8.4-RQ-002]

The Contractor shall provide a Manufacturing and Inspection Plan (MIP) describing the sequence of the work, milestones, control points and required reviews. This shall also provide a work breakdown structure and the corresponding detailed schedule.

[GM3S_8.4-RQ-003]

It shall identify as a minimum, the following:

- Requirements originated from the development and validation strategy as defined in the Technical Specification (qualification and validation requirements, needs for mock-up or prototypes…).
- A list of the required hold points, witness points (required by the Client or a third-party inspection agency), notification points and all reports, reviews, and approvals, as required.
- Identification of all activities and inspections / tests / examinations to be performed in order to comply with the applicable legislation, standards or codes and requirements as specified in the Technical Specification.

[GM3S_8.4-RQ-004]

For each particular activity, the MIP shall:

- Identify all the required input documents (procedures, plans etc.,)
- Identify the applicable requirements and instructions.
- Identify whether or not that activity is to be witnessed or whether notification is required.
- Identify the provision for recording the verification and completion of the listed operations.

[GM3S_8.4-RQ-005]

The level of detail in the MIP shall be such as:

- To prevent the inadvertent bypassing of critical test and inspection points.
- To enable adequate planning, monitoring and verification of key activities.

[GM3S_8.4-RQ-006]

The MIP shall encompass the whole Scope of the Framework Contract, including any work to be performed by Subcontractors.

[GM3S_8.4-RQ-007]

To ensure that activities are carried out as directed in the MIP, the Contractor shall make the document directly accessible to those carrying out the Works.

[GM3S_8.4-RQ-008]

The MIP shall be in English but shall also be available in a language easily understood by those carrying out the manufacturing activity.

[GM3S_8.4-RQ-009]

For some sequences of the MIP, a more detailed inspection and test plans (ITP) might be required.

[GM3S_8.4-RQ-010]

For these, the reference of the detail plan shall be indicated in the sequence entry of the MIP. The detailed plan shall have the same outline format as the MIP.

[GM3S_8.4-RQ-011]

Client’s acceptance of the MIP shall not in any way limit the Contractor’s duties and obligations pursuant to the Framework Contract nor diminish any liability on its part in respect thereof.

[GM3S_8.4-RQ-012]

The MIP shall follow and be built according to the Procedure for implementation of a Manufacturing and Inspection Plan [18, 20 & 21]. The format of the MIP shall be according to the template included in [19]. No change to this format will be accepted without the prior written approval of the Client.

13.5.9 Requirements of Section 8.4.2 (Requirement for Manufacturing Inspection Plan) of GM3S

This applies in full along with the following additional requirements:

For effective and efficient manufacturing process control, IO has implemented an interactive Manufacturing Data Base (MDB) platform. MDB is basically an electronic MIP, with a well-structured and flexible data-storage that can be adapted to any procurement or contract and allows full traceability.

The sequence and status of all the manufacturing activities can be accessed online from anywhere by all the stakeholders. It provides an easy cross-referencing with all the reference documents and drawings and permits the manufacturer to upload all the records generated (inspection reports, testing records etc.) during manufacturing.

The Manufacturing Database applies the global ICP security scheme. Each Contractor can only access its own data which is only to relevant IO team (usually division). Access rights are fully transparent (e.g., a Contractor can always check who is given access to its data) and flexible, i.e. extra restrictions can be applied if needed.

[GM3S_8.4.2-RQ-001]

All the manufacturing activity shall be through an approved MIP. There shall be one top level MIP for each major assembly, which shall refer to multiple MIPs, as per the requirement. Once the MIP template is approved, IO will integrate it with MDB for managing the manufacturing activity.

[GM3S_8.4.2-RQ-002]

All the manufacturing documents (procedures, plans, records, reports etc.,) shall be submitted by the Contractor to the Client through the Client's MDB. All the documents that need review and which are revision control documents (like procedures, etc.,) are to be uploaded for review in IDM / SMDD first and once they are approved by IO, shall be referred in MDB as hyperlinks. All the reports that get generated (any inspection, examination and testing report) shall be uploaded in MDB for the approval of IO. All the control points (Hold Point, Notification Point and Authorization to Proceed Points) shall be managed through MDB.

[GM3S_8.4.2-RQ-003]

The MDB access shall be given only for the manufacturing activities of the Contractor. All the manufacturing activities of the subcontractors beyond the Contractor shall be through a paper MIP (and not in MDB). After completion of this (paper) MIP, the finalised MIP and associated documents (e.g., EOMR) shall be uploaded in the MDB at appropriate stage of the main manufacturing by the Contractor.

13.5.10 Requirements of Section 8.4.7 (Inspections) of GM3S

This applies in full along with the following additional requirements:

[GM3S_8.4.7-RQ-001]

Planned and documented audits shall be performed by the Client to verify compliance with the technical and quality requirements of the Contract.

[GM3S_8.4.7-RQ-002]

These activities may be extended to the Contractor's Subcontractors, and the Contractor shall ensure that Client's right to conduct periodic audits, reviews, surveillance and inspection of the quality system and verification of its compliance with all quality and technical requirements of the Framework Contract, is incorporated into any subcontract.

[GM3S_8.4.7-RQ-003]

In the event of deficiency detected in the Quality System, the Contractor shall implement, or ensure that the Subcontractors implement, corrective actions, in accordance with a schedule agreed by the Contractor.

[GM3S_8.4.7-RQ-004]

The Contractor shall conduct periodic audits, reviews, surveillance and inspection of the activities, including those performed by Subcontractors. The Contractor shall notify the Client in advance to allow the Client to attend this activity.

[GM3S_8.4.7-RQ-005]

The Client shall have the right to dispatch its own inspectors or personnel to attend any of these activities.

[GM3S_8.4.7-RQ-006]

The Client shall have the right to be accompanied by observers in respect of any scheduled visit to the Contractor's premises for the purpose of any audit, review, surveillance or inspection.

[GM3S_8.4.7-RQ-007]

Any observer who attends the Contractor's premises with the Client shall be identified and notified to the Contractor in advance.

[GM3S_8.4.7-RQ-008]

The observers shall be bound by appropriate confidentiality obligations, to be agreed in advance.

[GM3S_8.4.7-RQ-009]

The Contractor shall, take all necessary measures to allow appointed representatives of the French safety authorities the same unrestricted access as is accorded to the Client. The Contractor shall, at the request of the Client, provide a representative able to explain, in French, the issues and progress to the French safety authorities. Such access shall be coordinated in advance with the Contractor.

[GM3S_8.4.7-RQ-010]

Inspections shall be in accordance with the ITER Procurement Quality Requirements [13].

[GM3S_8.4.7-RQ-011]

In case of concerns regarding the quality of the manufacturing activities, the Client reserves the right to perform unscheduled inspections in accordance with the ITER Procurement Quality Requirements [13].

[GM3S_8.4.7-RQ-012]

The Client may also request the Contractor to carry out on-the-spot checks in addition to the checks foreseen in the Technical and Management Specifications. In such a case, the Client has to provide a description of its concerns and the rationale behind such request. Upon receipt of such request, the Contractor shall evaluate the potential impact of such unscheduled inspections on the production costs and schedule. Based on all these considerations, the Parties shall agree on a course of action to tackle such issues. The actual date(s) of the unscheduled inspections shall be determined by agreement between the Parties.

[GM3S_8.4.7-RQ-013]

The Contractor shall inform the Client of all locations where Contract is implemented.

[GM3S_8.4.7-RQ-014]

The Contractor shall take all necessary measures to allow the Client unrestricted access to all the Contractor's documentation, premises and personnel (including that of its Subcontractors) during

all stages of the Contract for the purpose of such audit, review, surveillance and inspection as the Client may consider necessary.

[GM3S_8.4.7-RQ-015]

The Client reserves the right to make unscheduled visits to the Contractor's or Subcontractors' premises in which the manufacturing activities are developed, and free access shall be provided at reasonable times.

[GM3S_8.4.7-RQ-016]

The Client or his representatives shall be permitted to take photographs and / or video recordings of any activity relating to the Contract. The material so obtained shall remain confidential.

[GM3S_8.4.7-RQ-017]

The Client shall have the right to deploy permanent inspectors working at the Contractor's premises/facilities to supervise and monitor the Contractor's work both in terms of quality and schedule.

[GM3S_8.4.7-RQ-018]

Should this be required, the Contractor shall reserve an office near to his premises/facilities for the inspectors, equipped with a telephone and facsimile with international access, and computers with internet access.

13.5.11 Requirements of Section 8.7.3 (Deviation Request) of GM3S

This applies in full along with the following additional requirements, if DR is originated by the Subcontractor.

[GM3S_8.7.3-RQ-001]

When a deviation is foreseen, the Contractor shall prepare a proposal with a technical justification and discuss it with the Client [25]. If the proposal is considered beneficial, the Contractor shall request the Client's approval by issuing a Deviation Request in the format of the Contractor's Deviation Request Template [14]. The Contractor is permitted to use their internal templates (ensuring that the file contains IO cover page). The internally approved DR shall be uploaded into IDM so that the DR has a well-defined UID (as long as the IDM is the DR management tool). It shall contain the mandatory information as per Section 5.2 of [15].

[GM3S_8.7.3-RQ-002]

The Deviation Request shall contain or refer to all relevant material available to enable an informed decision to be taken. In particular, it shall include an assessment of the Deviation's consequences in terms of cost, delay, risk and quality. The four main steps of the DR process that shall be followed is detailed in Section 6.2 along with Figure-1 (Flowchart of DA/CONT-DR) of [15].

[GM3S_8.7.3-RQ-003]

The deviation shall be implemented by the Contractor only after reception of the Deviation Request approved and signed by the Client.

13.5.12 Requirements of Section 8.8.6 (Non-conformity) of GM3S

This applies in full along with the following additional requirements:

[GM3S_8.8.6-RQ-001]

Contractors, contractors, sub-contractors may identify any internal NC that need to be managed internally within the performer's organization without involving IO and other external entities, when they satisfy the following criteria:

- NC will not affect the technical requirements of the final products and activities delivered to IO or different other entities (other DAs, Contractor, contractor) in the scope of ITER project.
- NC will not have impact on contractual requirements.
- NC will not have impact on cost and schedule related to ITER project.
- NC will not have impact on regulatory requirements applicable for ITER project.
- Internal NC of performers shall be recorded using performer's NCR templates and internal database (if applicable). A list (log/ register) of internal NCRs needs to be maintained by the performer to allow strict control of NCR stages, trend reports and analyses. This internal NCR log shall be available at IO/ DAs request during the audits and inspections.

13.5.13 Additional requirements in addition to the requirements specified in sections 6.0 and 8.0 of the GM3S

13.5.13.1 Risk Management (to be considered as Section 6.6 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.6-RQ-001]

Risk management shall be performed in accordance with the IO Risk Management Plan.

[GM3S_6.6-RQ-002]

The Contractor shall, within ninety (90) calendar days of the entry into force of the Framework Contract, draw up and submit to the Client, for information, a plan for managing risks associated with implementing the Contract (hereinafter referred to as the "Contract Risk Register").

[GM3S_6.6-RQ-003]

The Contract Risk Plan shall set out a register of the risks which may impinge on the successful execution of the Contract following the applicable Contractor's Risk Management System and, for each identified risk shall provide:

- A summary assessment of likelihood of the risk materializing and of the potential consequences for the successful execution of the Contract.
- A review of performance against approved DWS and actions to identify potential development of delays.
- Possible measures and actions for risk exposure reduction or mitigation and conditions for triggering such measures.
- An attribution of responsibility in the structure of the Contractor for managing the risk.
- A plan, consistent with the Contract Schedule, and arrangements for regular monitoring and review of the risk.

[GM3S_6.6-RQ-004]

The Contractor shall implement possible measures for risk reduction and mitigation following a graded approach and shall provide to the Client progress reports on a quarterly basis in accordance with an agreed to template.

[GM3S_6.6-RQ-005]

If and when conditions to trigger specific risk reduction and mitigation measures occur, the Contractor shall inform the Client promptly. The Parties shall consult on the appropriate actions to be taken and on their consequences for the execution of this Framework Contract.

[GM3S_6.6-RQ-006]

The Contractor shall provide and maintain a Contract Risk Register, following its Risk Management System.

13.5.13.2 System Compliance (to be considered as Section 6.7 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7-RQ-001]

The Contractor's Quality System for the Contract shall be compliant with the following documents:

- ITER Procurement Quality Requirements [13].
- Procurement Requirements for Producing a Quality Plan [16]
- ITER Quality Assurance Program [23]
- ITER Policy on Safety, Security and Environment Protection Management [26]

[GM3S_6.7-RQ-002]

Contractors with a Certified Quality Management System based on a recognised Quality Standard(s) shall also include:

- Copy of the valid Quality Management System Certification.
- Quality Manual reference.
- A statement of compliance with the General Requirements (Section 6.0 of [1]).

[GM3S_6.7-RQ-003]

The Contractor's Quality System for the Contract shall address the points described in following Sections.

13.5.13.3 Management of Responsibility Allocation (to be considered as Section 6.7.1 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.1-RQ-001]

The Contractor shall identify and define the key roles to ensure that:

- The activities performed within the Scope of the Framework Contract are planned, implemented and controlled and their progress monitored.
- The Framework Contract requirements (Technical and Management) are reviewed and the review recorded.

13.5.13.4 Management of Non-conformances and Deviations Procedures (to be considered as Section 6.7.2 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.2-RQ-001]

The Contractor shall define:

- The procedure to handle Non-conformances.
- The procedure to handle Deviations.
- An individual Flowchart per process/procedure (deviation and non-conformity).

13.5.13.5 Management of Schedule (to be considered as Section 6.7.3 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.3-RQ-001]

The Contractor shall define its Time Schedule Management System, including:

- The usage of specific software tools.
- Time Schedule evolution.

13.5.13.6 Management of Deliverables (to be considered as Section 6.7.4 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.4-RQ-001]

The Contractor shall define:

- The procedure to handle Documentation and Records.
- A Flowchart for the Documentation Flow process/procedure, including the interaction with the Client.
- The Configuration Management records definition to guarantee that the documentation of the items to be procured is accurate and consistent with the actual physical design of the item and their maintenance.
- The procedure of acceptance requirements review/verification before dispatch.
- The Manufacturing and Inspection Plan update process.

13.5.13.7 Subcontracting Management (to be considered as Section 6.7.5 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.5-RQ-001]

The Contractor shall define the Subcontracting Management System to comply with this Management Specification.

13.5.13.8 Assessment and Validation Management (to be considered as Section 6.7.6 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.6-RQ-001]

The Contractor shall define a System to comply with the Assessment and Validation Requirements set out in the Technical Specification. This System shall include:

- A procedure defining how the Contractor will monitor and record the compliance with the MIP.
- A procedure defining how the Contractor will supervise and monitor all measurement and testing equipment used in the execution of the works.

13.5.13.9 Licensing Requirements (to be considered as Section 6.7.7 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.7-RQ-001]

The Contractor shall detail the Licensing Requirements Assessment according to Section 5.3 of GM3S.

13.5.13.10 Incoming Materials Management (to be considered as Section 6.7.8 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.8-RQ-001]

The Contractor shall define a procedure detailing how and when acceptance of goods and materials to site/premises are controlled according to the requirements set out in the Technical Specification of the Framework Contract.

[GM3S_6.7.8-RQ-002]

This procedure shall include for the provision for review and acceptance of manufacturer’s compliance Certificates, Independent Accreditation Certificates and any associated Test Certificates relating to the materials being delivered.

13.5.13.11 Design Management (to be considered as Section 6.7.9 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.9-RQ-001]

The Contractor shall describe in accordance with the Technical Specification of the Framework Contract:

- The Design Management System (including review, verification & validation).
- The Design review procedure.
- The Independent Verification methods and indicate who will make this verification.

13.5.13.12 Resources Management (to be considered as Section 6.7.10 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.7.10-RQ-001]

The Contractor shall define the Resource Management and Training System to comply with the Contract requirements.

[GM3S_6.7.10-RQ-002]

The Contractor shall provide details of his Resource Management system, detailing where applicable:

- The number and type of personnel involved in each of the Contract activities.
- Measures in place to ensure adequate recruitment of sufficiently experience personnel.
- Specific training provided to its personnel.
- Specific qualifications held by those performing particular operations, especially operations requiring special control measures and / or supervision.

[GM3S_6.7.10-RQ-003]

The Contractor shall maintain a register of all employees and those of his subcontractors, which shall demonstrate that all workers are appropriately qualified for the activities they shall be required to carry out.

[GM3S_6.7.10-RQ-004]

The Contractor shall maintain a list of all the approved subcontractors / sub-Contractors and the activities they are planning to subcontract. An Approved Contractor's List (ASL) shall be prepared giving the details of all subcontractors / subcontractors, the activity/(ies) they shall perform, their Quality Management System (ISO etc.,), accreditations (needed for testing laboratories) if any, list of certified/qualified experts (if NDE is subcontracted), audits / surveillance plans conducted for selection of the subcontractor/subcontractor etc.

All these documents shall be transmitted to the Client for review

13.5.13.13 Reporting on Intellectual Property (to be considered as Section 6.8 of the GM3S)

The following are the requirements that shall be met:

[GM3S_6.8-RQ-001]

The Contractor shall identify all the tasks/operations that can lead to results as well as the results themselves that can take the form of an invention, information, business confidential information, trade secrets, software, etc.

[GM3S_6.8-RQ-002]

The Contractor shall prepare a declaration of IP foreground as soon as the foreground is created.

[GM3S_6.8-RQ-003]

In addition to the foreground declaration the Contractor shall inform on any IP relevant issue such as requests for access to IP by third parties or any IP issue that may impede performance of the Contract.

[GM3S_6.8-RQ-004]

The Contractor shall include any IP related information in an independent annex attached to the progress reports and to the End-of-Manufacturing Report (the “IP Progress Report” and the “IP Final Report”) to ensure that relevant information is protected.

[GM3S_6.8-RQ-005]

The Contractor shall identify in the IP reports any confidential information to ensure the confidentiality and the proper management of strategic IP information (for example trade secrets or information on patentable subject matters).

The purpose of the Final IP Report is to have a compilation of IP relevant information that can be detached from the End-of-Manufacturing Report, as a standalone document, without losing its value.

13.5.13.14 Change Management and Amendments (to be considered as Section 8.7.5 of the GM3S)

The following are the requirements that shall be met:

[GM3S_8.7.5-RQ-001]

Any changes to the requirements of the Framework Contract proposed by either the Client or the Contractor during execution of the Contract are subject to the Deviation Request process described in ITER Requirements Regarding Contractors Deviations and Non-Conformities [27, 31 & 32].

[GM3S_8.7.5-RQ-002]

The proposed Deviation Request shall be jointly assessed by the Client’s TRO and the Contractor’s TRP in charge of the Contract since consideration of threshold levels for change management defined in the ITER Configuration Management Plan [17].